

## PERSONAL COLUMN

It is not just in the White House that administrative difficulties have been occurring. Messages winging their way to me in unmarked brown envelopes suggest that all is not well with the decision-making processes of some local education authority offices either. This is not just a matter of inefficiency. There is nothing new about inefficient education offices. The problem lies deeper than that and could get worse.

What might "worse" look like? Join me then in an education office of the future where terminal rot has set in. The story starts, as so often in bureaucracies, with an exchange of memoranda:

*Memo from chair of education committee to chief education officer:* What is all this about closing the youth club at Hooha on Thursday? I have not been properly consulted and we do not agree. I am away for the next few days but please see this is sorted out immediately. Signed: Brenda pp J Jones (chair)

*Memo from CEO to chair of education committee:* Unfortunately I find I too have to be away for the next few days, but I have passed your note about Hooha to my deputy to deal with appropriately.

Our CEO of the future, a student of advanced administrative techniques, then taps the following message on to his word-processor:

*CEO to deputy:* Here is a note from chair's office for you to tackle while I am away. Several points occur to me about it:

□ The provenance of the note is uncertain. Granted Brenda's unimpeachable credentials as a political adviser, there is nothing in writing from chair to suggest she has authority to sign on his behalf.

□ The decision to close Hooha was confirmed by the education committee last week. Chair chaired that meeting. By "not properly consulted" we must assume that chair did not agree with the decision in the first place or has only just realized that Hooha is in the parliamentary constituency he is nursing. These are deep waters which it is for you to plumb.

□ That "we", who are said not to agree to the closure of Hooha, are a little mysterious. My informant on the Majority Party group has kindly run through the private tape



PETER NEWSAM

## Crossed wires

**'Absolute power corrupts absolutely; so too does absolute confusion'**

recordings she keeps on these occasions and assures me the issue was not discussed at the last formal group meeting or even at the leader's own informal pre-group one. Is there some other group at large in the woodwork of the body politic? Or has there been a rush of royalty to chair's head? Or Brenda's?

□ I am sorry not to be here to deal with the matter myself, but the options are clear enough:

— to accede to what seems to be the drift of the request attributed to chair. Once the cost, formal impropriety and general absurdity of keeping Hooha open become apparent, we — in this case you — will be blamed for failing to ensure that the matter was, in chair's phrase, "sorted out";

— not to accede to chair's request. Its cost and absurdity will not then become apparent. Chair will, however, be confirmed in his belief that we — in this case you — are being deliberately obstructive. Nor will Brenda be pleased. As to blame, see above.

□ Neither of these options is without its difficulties, but given the heavy smoking on which you have embarked since I uncovered your plans to supplant me, a small office fire must always be a possibility. Were any such conflagration to occur, matters receiving urgent attention on your desk, such as the enclosed papers, could plausibly be ex-

pected to perish. Failing such an outcome, I must leave it to you to see this matter through.

What, you ask, is remarkable about this commonplace little exchange between professional colleagues? Hold on. The CEO continues:

□ In reminding you of the need to destroy this note, may I assure you that positively the last thing I would wish to do here as CEO is to prevent you from succeeding me? In this connection, rest assured that I have not distributed the tape of the song you articulated so clearly at the Christmas party. Yet. The views you there express on chair and Brenda might, by some, be thought amusing, but...

Let us leave the CEO's first memorandum there and move on to the second he taps out on his word processor:

*CEO to deputy:* Here is a note from chair on Hooha. Obviously, we must do as he suggests. Please see to it forthwith.

Confused instructions from the CEO? Not really. The alert reader will be able, by answering the questions that follow, to observe advanced administrative technique in action.

Why did the CEO, pen in hand, fail to sign that first memorandum before he put it in an envelope addressed to his deputy?

Why did the CEO's finger stab lightly at the word processor key labelled PR (in honour of President Reagan) and thereby

eliminate all recollection of the said memorandum?

Why did the CEO, pen still in hand, remember to initial the second memorandum and mark it "to file"?

Why did the CEO thereupon dance a little jig and hum something like the tune of "So long, it's been good to know you"?

Why — and here is an easy one to end with — did the CEO not send a copy of the second memo to his deputy?

This peep into the future is becoming sordid. So let us leave the last word with Brenda, addressing chair shortly before the deputy CEO's sudden departure from the authority's service, "... and then to suggest that the CEO actually told him to start the fire. Incredible. Of course, I keyed straight into old Stoneface's (The CEO? Ed.) word processor and his instructions, for once, were clear as the day..."

But, what does cause administrative integrity to collapse? Lord Acton (to the subsequent dismay of many thousands of sixth-formers who have had to produce essays debating the point) once declared that "absolute power corrupts absolutely". So too does absolute confusion about what is supposed to be responsible for what.

That is the message contained in the brown envelopes and in the news from the White House.

### NEXT WEEK

**In the highlands**  
Diane Spencer reports on a drive to multicultural education in the highlands

**Public versus private**  
Some new research suggests privatization of nurseries results in serious lowering of standards

**Back to the future**  
Could the International Baccalaureate provide a model for the new sixth form?

**Industrial relations**  
Roger Liddle reviews the latest books on unions and the law

**Extra: Computers in education**

### NOTICEBOARD

#### PEOPLE...

The Home Secretary has appointed the chairmen of three working groups set up to consider problems associated with young people and crime: Mr Jeffrey Greenwell, chief executive of Northamptonshire County Council; Miss Michelle Elliott, co-director of Kidspac; and Baroness Masham.

#### CONFERENCES...

**March 11**  
Values and child-rearing Voluntary Organizations Liaison Council for Under-Fives seminar with Professor Michael Rutter in south-west London. Details from VOLCUP: 01 278 3459.

**March 14**  
National Association for the Support of Small Schools conference and open forum at Cornsought Hall, London on *Perspectives on small schools* with Giles Radice, Ted Wragg and Mike Davies. Details from Molly Stiles: 0603 613088.

**March 24**  
Nuclear energy — the outlook following Chernobyl Sixth-form conference at the House of Commons organized by the Council for Education in World Citizenship. Speakers include Peter Walker, John Collier, and Jonathan Porritt. Tickets £1 from Margaret Quast, CEWC, Seymour Mews House, Seymour Mews, London W1H 9PE.

**March 25**  
Information technology and special

**needs in further education** National Bureau for Handicapped Students seminar and open meeting for lecturers and advisory staff at the NW ACCESS Centre, Oldham College of Technology. Details from Mrs D Walker, NBHS, 336 Brixton Road, London SW9.

**March 26**  
Temporary British history 1945-70Sth term conference at the London School of Economics organized by the Institute of Contemporary British History with Brian Lapping, Ben Pimlott, Anthony Seldon, John Barnes, Peter Shore and Peter Hennessy. Tickets £2 from Pippa Lewis, 30 Stone Lane, Lyddard Millcott, Swindon SN5 9LD.

#### COURSES...

**March 25, April 1 and 8**  
Three sessions organized by the Centre for Educational Development and Training (CE/HD) on *Getting to know more about working with small groups*. Details from Mrs Maclellan Agnew, Centre for Educational Development and Training, Manchester Polytechnic, Elizabeth Gaskell Site, Hathersage Road, Manchester M19 0JA.

**April 10-12**  
National Organization for Initiatives in Social Education annual study course on racism and sexism awareness at Birmingham Polytechnic. Fee £50 (residents), £35 (non-residents). Details from NOISE Course Organizing Committee, 37 Willow Crescent, Balsall Heath, Birmingham B12 9NS.

**April 12-16**  
Association of Workers for

**Maladjusted Children course on Life skills and the curriculum** — the care, education and therapeutic provision for emotionally and behaviourally disturbed children, at the College of Ripon and St John, York. Speakers include Roger Burtland, Telford Griffiths and Margaret Robson. Fee £120 (non-members £135). Details from Alan Fox, 1587, course Booking Office, Longway Lodge Road, Caerleon, Gwent NP23 1QS.

#### EVENTS...

**March 7 and 10**  
Photographic workshops at the Commonwealth Institute, Kensington High Street, London W8. The first, *Photographic contexts on March 7*, is for those involved in media education, the second, *Representing cultures on March 10*, is for teachers on using photography in the classroom. Details from the education department at the Institute.

**March 18**  
Psychoanalytic insight in the classroom: asset or liability? Lecture by Susan Dylis at the Tavistock Centre, 120 Belsize Lane, London NW3 at 7 pm, organized by the Forum for the Advancement of Educational Therapy.

**March 18**  
National Association for Gifted Children and the Potential Trust: open meeting and discussion on working with children with special needs arising from a high degree of untapped potential. North Westchester community school, Studio Theatre, North Ward Road, London W2 at 7.45 pm with Anne Comino-James and Joan Sarton.

**March 19**  
In-service training on weather satellites organized by Adrian Beaumont, head of physics, Whitmore High School, Harrow. The school is testing a number of satellite tracking systems during March and is establishing contacts with schools around the world. Details from Adrian Beaumont, Whitmore High School, Portlock Avenue, Harrow, Middx HA2 0AD.

#### INFORMATION...

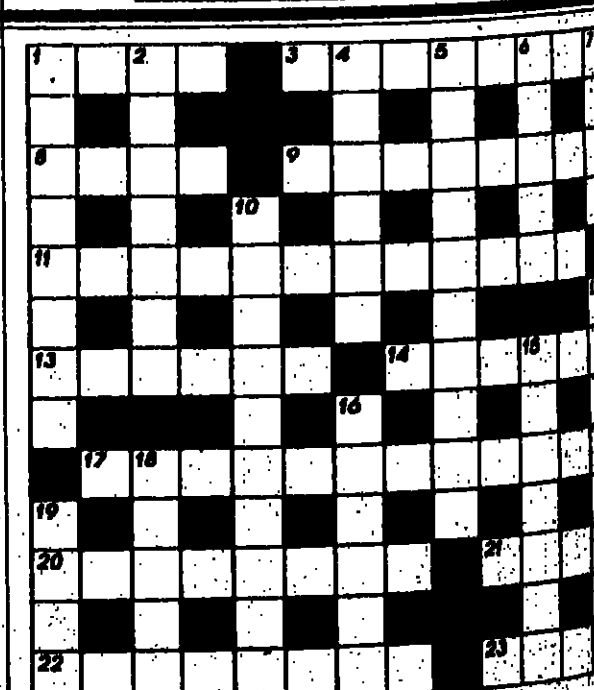
**Art Exhibition**  
The closing date for entries for the Cadbury's National Exhibition of Children's Art is April 18. The exhibition is open to anyone under the age of 18. Details from Cadbury's National Exhibition of Children's Art, Granby School Lane, Durham, Leazes, Alnwick, Cheshire WA1 4 6SZ.

**Textiles**  
During the summer term Mrs Vivian Bell will be undertaking a teacher fellowship at the Essex Institute of Higher Education on weaving, spinning and dyeing in junior schools. She would like to hear from readers who teach any of these subjects in junior schools either as a specialist topic or as part of the art and craft curriculum. Please write to her at Nabbits county junior school, Forsythie Close, Springfield, Chelmsford, Essex.

#### PUBLICATIONS

**Summary of the 1986 Education Act** by Joan Sallis for the Advisory Centre for Education, price £2.25 from ACE, 18 Victoria Park Square, London E2 9PB.

### No 295 CROSSWORD by Ruth



#### Across

- 1 Childishly claims the luggage (4)
- 3 Frank ceased being funny when father came in (8)
- 8 Work like a pack of snobs (4)
- 9 Match money playing dice (8)
- 11 I am under some order for a minor legal offence (12)
- 13 Possibly, inject a hook-noodle (6)
- 14 He goes round filling post-holes (6)
- 17 Will check on both sides? (12)
- 20 The inspector who was once a collie (4)
- 21 Very keen to make a

#### Down

- 1 Unconventional description of Old Peter (8)
- 2 Change and lubricants (7)
- 4 Given support or cut out (6)
- 6 Problem girl in acute trouble (10)
- 6 Leave work? (4)
- 10 Why? (4)
- 11 Why? (4)
- 12 Why? (4)
- 13 Why? (4)
- 14 Why? (4)
- 15 Why? (4)
- 16 Why? (4)
- 17 Why? (4)
- 18 Why? (4)
- 19 Why? (4)
- 20 Why? (4)
- 21 Why? (4)

# Educational Supplement

FRIDAY MARCH 13 1987 NUMBER 3689

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Going to the wall: the former head of Norbury Manor high school in south London, Mr Peter Fletcher, at the controls of an 85ft demolition crane used to knock down the building in which he taught for 11 years. The school's bell tower is being preserved to form the centrepiece for a new block of flats in Croydon.

## NAS/UWT pulls out of teaching council talks

by Bert Lodge

The second largest teacher union has withdrawn from negotiations to set up a general teaching council, it was revealed this week.

The news came hours after the National Association of Schoolmasters/Union of Women Teachers walked out of the staff appraisal talks the Government initiated last year.

The union gives three factors in its decision to boycott the talks to establish a professional body to control entry, standards and discipline — a structure favoured by many teachers:

- the Government's attitude to the public services in general and education in particular;
- the attitude of the Government to the pay of public sector workers in general and teachers in particular;
- the attitude of the Government to the role of trade unions, bearing in mind GCHQ and very recently the Teachers' Pay and Conditions Act.

Teachers prepare for action, pages 6 and 7

"Given the factors listed above, there must be a grave danger that the Government would take proposals for a GTC and misuse them to suit its own purposes."

Recent events prove the Government cannot be trusted to respect the fundamental rights of teacher unions, the union says in a document to be put before its annual conference in Bournemouth next month.

The formal gesture of withdrawal is contained in a letter from Mr Nigel de Gruchy, deputy general secretary of the NAS/UWT, to Mrs Mary Russell, secretary of the Universities' Council for the Education of Teachers, which initiated negotiations more than three years ago.

The talks had reached an advanced stage with the cooperation of the 17 professional associations involved.

Details of the functions of a general teaching council were broadly agreed by a working party last year (TES, October 3) and were sent out for consideration by the executives and possibly the annual union conferences.

They were accompanied by draft proposals for the composition of the council's all-important governing body, the crucial issue on which the last attempt to set up a GTC, nearly 16 years ago, foundered.

The draft proposals specify the numbers of seats for central and local government — 6, churches — 1, teacher trainers — 6 and other interested bodies such as the TUC, the CBI and parents' organizations — 4.

But they avoid any specific allocation to individual teacher unions — allowing them 28 seats to be shared out.

## CTCs 'lure thousands of retired staff'

Teachers who have opted out of the profession are ready to return to the classroom in the Government's planned city technology colleges, Mr Kenneth Baker, the Education Secretary, says in an interview published in today's TES.

He believes the colleges will "act like a magnet and draw hundreds of thousands of teachers out of retirement or out of early retirement".

Mr Baker says: "I've had many letters from teachers, especially those who have worked in inner-city areas, and they tell me that this is the sort of thing that they would be prepared to come back to teaching to do."

"They tell me they've been braced by the hassle of inner-city schools."

Mr Baker also reveals that he believes that two CTCs will be operating by September next year. Details of the first such college — to be established in Conservative-controlled Solihull — were revealed two weeks ago.

In addition, he says that children going to go to CTCs will have to face some form of aptitude testing "to determine that they have a particular aptitude for technology, although he adds: "We don't want schools to be selective in the way that grammar schools are."

Baker's vision of CTCs — page 41

## Rate-capped councils lift redundancy threat

by Barry Hugill

The jobs of teachers working in the nine local education authorities rate-capped by the Government are safe because of skilful use of "creative accountancy" techniques by politicians and their treasurers.

Despite initial dire warnings from the Labour-controlled authorities that jobs and services were at risk following the announcement in January by Mr Nicholas Ridley, the Environment Secretary, of the rate-capping, most of them will produce "standstill" budgets for the coming financial year.

The worst effect of the rate-capping will be a freeze on the appointment of new teachers to replace those leaving through natural wastage. And this will be modified by the continuing decline in secondary school rolls.

The L.E.A.s concerned are the ILEA, Haringey, Brent, Newham, Hounslow, Newcastle, North Tyneside, Sheffield and Gateshead.

Not all have fixed their budgets for the coming year, but all have decided that creative accountancy is preferable to serious cuts.

Some authorities are more creative than others and two London boroughs, Hounslow and Brent, are actually

budgeting for growth. The increased spending in Hounslow will be minimal, but in Brent it will be in excess of £1 million. Cuts are likely in Gateshead and Newham, but there will be no danger to jobs.

In most of the authorities there will be increases in the price of school meals and little, if any, maintenance work will be carried out on schools and colleges.

The failure of the Environment Secretary to control effectively the spending of Labour authorities despite his stringent penalty system has renewed demands from Tory back-benchers for legislation to outlaw creative accountancy.

Mr Ridley has taken steps to curb deferred purchase schemes under which authorities such as Liverpool, Manchester and Sheffield financed capital projects by borrowing on the international money markets.

And he is understood to be investigating ways of curbing many of the techniques now being used by borough and city hall treasurers at the behest of their political masters.

The aim of creative accountancy is two-fold. By "borrowing" money from

the reserves or from contingency funds such as those set up to cover the repair and maintenance of buildings, authorities provide themselves with much needed "cash in hand".

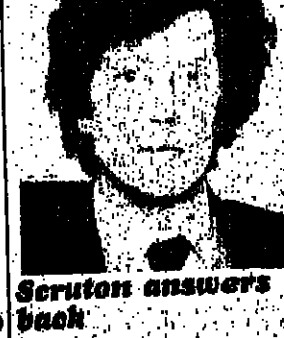
And by transferring revenue spending to the capital account — a complex accountancy trick much loved by treasurers — an authority can effectively reduce the apparent, but not the real, expenditure for the year.

The apparent reduction in expenditure is important for a rate-capped council because it provides an opportunity to escape capping the following year. And, because the amount of cash made available to local authorities by the Treasury decreases as their spending increases, a local authority can by creative accountancy "disguise" its real spending and win an increase in Government funding.

The London Chamber of Commerce is supporting the demand from ILEA's Labour leadership that the Government should provide it with additional cash to pay for the teachers' pay settlement. But the chamber is demanding that the authority introduces rigid economy measures to reduce its spending.

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## The hidden A level agenda

It would be a mistake to read too much into the apparently restrictive terms of reference of the A level review committee reported in last week's TES. They are deliberately not the last word in clarity and precision – indeed, they are not even the last word.

The committee, appointed by the Secretary of State under the chairmanship of Dr Gordon Higginson, an engineer who is vice chancellor of Southampton University, expects to receive further guidance upon its role before its first meeting.

Anyone with a passing familiarity with the television programme *Yes Minister* will have no difficulty deciphering the real messages of Mr Baker's announcement. For "In the light of the Government's commitment to retain GCE A level as an essential means of setting standards of excellence", read "I am not daft enough to be seen tinkering with A level this side of an election . . ." and in place of " . . . with the aim of maintaining or improving the present character and rigorous standards" insert " . . . but something needs doing about it urgently".

This is not a wholly cynical view: indeed, it is to Mr Baker's credit that, coming relatively late upon the argument for such a review, he has managed to get it under way at such a politically inauspicious moment.

The clue to all this, of course, is in the way such apparently tight restrictions on what the committee has been asked to do are immediately contradicted by the people he has asked to do it. For whatever else you might think, they are clearly people of independent mind and not yes persons.

Whatever the letter of their instructions says, they should, and no doubt will, take a broader view of the academic sixth form than that suggested by the Secretary of State's political announcement.

They are starting work several years late and working to a tight schedule. They have to report by Easter next year, which in reality means they have to have their arguments sewn up by Christmas. But they cannot afford the luxury of saying they'd rather start from somewhere else.

Nor can anyone else involved in sixth form exams afford to wait for Higginson. First, because whatever

eventually emerges from the committee is unlikely to influence the sixth form before the 1990s. So the exam boards, the Secondary Examinations Council, and the sixth form teachers need to be at action stations long before then to cope with the collision between the new GCSE approach and the old GCE A level syllabuses in September 1988.

And second, anyone with anything to say to the committee about the sixth form curriculum needs to work up evidence now to a state of instant readiness for this lightning review.

The committee is clearly expected to sketch, in broad brush terms, the principles that should govern the main academic exams for the sixth form: and since the sixth form is irredeemably bound up with its exams, therefore, the principles that should govern the sixth form curriculum. Though it is never referred to in the terms of reference, it is inconceivable that the committee will not also consider, *inter alia*, the fledgling AS levels.

That immediately brings in considerations of breadth – now favoured by the university vice chancellors – versus the specialization which university entrance tutors are said to demand.

Red rag phrases in the terms of reference like "consistency" are redolent of moves to limit the range and number of A level syllabuses and "essential content" immediately invites the question, "essential for whom?" Essential for the single subject university department, and therefore for only a minority of those studying a given A level? Essential to a broader range of undergraduate courses? Or to those taking none?

Certainly the Cockcroft report – the closest we have come to a mould-breaking education commission in recent years – rejected the notion that A level maths syllabuses should be dictated by university mathematicians. No doubt Sir Roy Harding, a member of Cockcroft (and Cockcroft's deputy at the SEC) and now one of Dr Higginson's famous five, will remind his new colleagues of the background.

Many of the arguments are well rehearsed. They were touted in all previous attempts to reform A level and have been revived quite recently by the vice-chancellors, the SEC and the examination boards, among others.

Indeed, the GCE boards regard Mr Baker's initiative as hijacking their own proposals for an orderly revamping of sixth form exams which they put to the Secretary of State last year.

Mr Baker can rightly argue that wider counsels than the boards' should prevail in such a review. The boards favour an evolutionary, bureaucratically tidy, change in sixth form exams. They speak for the considerable number who hope for a gradual introduction of AS levels to offset over-specialization. For the boards are not the only ones who doubt their own capacity – or that of the schools – to mount another major advance while still shell-shocked in the aftermath of GCSE.

But the alternative to the gradualist approach, a "big bang" change to a radically different system has its adherents too, like Professor Alan Smithers and Dr Pamela Robinson (see page 19) who would like to see something along the lines of the International Baccalaureate.

Either way, the committee will have to address two fundamental issues. The first is the resource implications of broadening. The GCSE has shown that the true development costs of change are often underestimated and any extension of compulsory maths or science into the sixth will inevitably require even more of the very scarcest specialist teachers, unless these moves are coupled with some innovative technological or distance learning solutions to such shortages.

The second has to do with credibility and choice. There is a strong belief that the sixth form can never be broadened voluntarily until fears that it will disadvantage those students hoping for a university place are met. This requires nothing less than a positive incentive: universities have to prove a preference for the broadly educated. They may even have to consider the reintroduction of some kind of matriculation requirement in the form of a grouped certificate.

## COMMENT

### Computer doldrums

Until recently, articles on computers in education were full of hope and excitement. Now the depression and worry that pervades so much of the education system has spread there too (see *Computer Extra*, pages 41–44). The articles are full of problems, missed opportunities, and tantalizing possibilities that no one believes will be realized on any significant scale in the foreseeable future.

The need now is for some serious strategic planning. Questions have to be answered, and priorities set. What level of introduction to information technology should all pupils have at various stages in their education, from primary to higher education and training? Should computer studies be dropped as a GCSE subject, in order to give all students more access to available hardware?

What is the potential of computer-assisted learning, or interactive videodisc, at different stages? Could they be used more systematically to raise standards, particularly in shortage subjects? And, depending on the answers to such questions, what provision of hardware, software, and teacher training is needed for the next few years.

There is by now plenty of experience that can be brought to bear on these questions. Perhaps, in this case, we really do need a committee – a latter-day educational Alvey – but only if there is real political will to implement its findings.

Some of the developments are being tackled at the European level. Here,



thanks mainly to the European Commission, there has been some progress in recent years. The Not Invented Here syndrome is still very strong, but it is increasingly clear that no country on its own can provide the investment needed for research and development, and collaboration is gradually developing (see Brian Green and John Wood's article, page 41).

When the Microelectronics Education Programme was wound up, we were told that it was time for consolidation of what had been achieved. But it is impossible to consolidate on a national level when provision is so unequal, depending on a TVET scheme here, a dynamic teacher or local authority adviser there, funds from parents or a friendly neighbourhood company somewhere else, a city technology college on the horizon. In this high-cost and high-potential area, even more than any other, a national approach to curriculum and management is needed, with a strong emphasis on funding and development.

### Hillgate defended

Although the large number of column inches generated by the Hillgate group's pamphlet *Whose Schools?* revealed a great deal about the paucity of news in the dead days between Christmas and New Year, Professor Scruton and his friends nevertheless feel that "the objections raised in the press . . . have been phrased in dismissive and derogatory language". On page 21 he sets out his answers in the hope of carrying the argument a stage further. The Hillgate proposal is that all schools should be disestablished – turned into private educational trusts – and that public funds for education should be channelled through *per capita* payments, so much a head for every child of a given age. Parents would thus be able to apply to send a child to any school. If a child were removed from school A to school B, the payment would move with the child.

This is a version of the voucher idea – the creation of a pseudo-market for education. On top of all other monitoring procedures – by HMI, examinations or whatever – parents would apply the discipline of the market place and decide which schools prospered, which failed.

This is the proposal. But Professor Scruton and his friends have chosen to wrap it up in a great deal of incidental comment on GCSE, teacher training, local education authorities, child-centred education and the intrinsic value of education. These matters, on which the new right have passionate opinions, divert discussion from the main

proposal which stands or falls on the ideological belief that private is good and public is bad.

Even those who might, pragmatically, think that a few schools financed in the way he suggests might add variety to the educational scene – those, for instance who support the city technology colleges (if there are any) – might nevertheless reject the dogmatic conviction that a network of private schools must be better than any system provided by public authorities.

Unfortunately, it's when Professor Scruton lets fly on side issues that he goes over the top. "Teaching . . .", he says "should be centred not on the child but on the subject . . .". This is clear enough – a restatement of a familiar view. Then the philosopher takes over and he follows his argument over the cliff. " . . . for it is the subject which is at risk in the educational process. The danger is not that children will lose interest, but that skills, culture and knowledge will be lost".

What is missing is any obvious connection between Professor Scruton's educational philosophy and his proposed remedy. Unless, that is, you believe that parents in the market place would unite in choosing the package of cultural values which Professor Scruton chooses to deploy.

no comment

"Biological attitude: Vicky has brought a caring attitude and enthusiasm to her study of young mice, and it's a great pity that some have perished in the recent severe weather."

Professor Scruton's educational philosophy and his proposed remedy. Unless, that is, you believe that parents in the market place would unite in choosing the package of cultural values which Professor Scruton chooses to deploy.

## Second opinion

### Fighting for Oxford's future

If the media are to be believed, Oxford's common rooms are in a state of commotion over the election of a new chancellor. Some 40,000 MAs are eligible to vote this weekend in a successor to the Earl of St John.

There are two prevailing opinions in most of the coverage – one that it does not really matter who is elected, the candidate and the little else on their minds.

The chancellorship is no longer as simply a ceremonial role, as in the days of Curzon, Cave, or St John. With the future of the university at much an issue, it is now acknowledged that the new chancellor will have a pitch in as much as anyone else to the university's corner. All candidates now appear to accept this.

Oxford may seem prosperous. The reality is that even the well-endowed are suffering. The second round of University Grants Committee cuts mean an annual shortfall of £10 million for Oxford – hence, the shedding of 140 academic posts, vital professional chairs unfilled, dons queuing to go abroad, science slipping from the frontiers, and even the famed Oxford Playhouse to be closed this year. Though the effects would take decades to show, don't talk of Oxford doing from the international super league.

Edward Heath has been the most explicit about an impending crisis. The campaign team has stressed the premier's commitment to maintaining a national network to bring in funds to the university. He recently noted £150,000 for Nuffield College in his manifesto, he writes of the day the new chancellor "to orchestrate the divergent intellectual demands with the practical problems faced by the university".

Roy Jenkins, the former *Sunday Times* editor, also speaks of the need for a "tribune as well as a ceremonial role" against the wave of philistinism and short-sightedness currently threatening research, learning and the very concept of a true university.

Even Lord Blake, the Tory barrister, who began by emphasizing common values, has now said: "If the university wanted its chancellor to be engaged, I could do it." Dr John Payne, an expert on food safety, is standing as an out-and-out reforming candidate.

Whether Oxford likes it or not, it finds itself time and again in the spotlight – far more even than Cambridge. Two years ago, when they had an opportunity to vote to deny Mrs Thatcher an honorary degree, they did so in part because they had an opportunity to vote "enough is enough" on education.

All this has meant that the election, being more widely discussed, has been by an overwhelming media interest. But also it is the first time since elections began in 1224 that there have been more than two candidates – only the fourth time this century there has been more than one serious candidate running neck and neck. The mock poll run two weeks before the proper election came, with Jenkins with 1,664 votes, with Payne on 1,605, Blake 1,332 and Pym 1,100.

The university has had hard days before – under the marauding monks and when it had to flatter the Stuarts and survived. It has just seen an international fund-raising campaign and a violent attack on teachers.

But the election this weekend is important. It will vote for the future of the university, for the future of the fund-raising, and Oxford.

## Rum do has grammar school lobby in a spin

by Barry Hugill

Sixth-formers at Sir Thomas Rich's grammar school in Gloucester appeared this week to have caused a hiccup in a campaign to prevent its demise.

The Alliance-controlled Gloucestershire County Council is doing its best to rid the city of its five grammar schools.

The chosen method of attack is to allow numbers to fall so low that the schools become unviable. The problem for the council is that Mr Kenneth Baker has intervened on behalf of the grammar schools and ordered the county to up the rolls.

Local Conservatives have rallied round the flag and are determined that selection should continue in the city – hence the "save our schools" campaign, a major part of which is to stress the importance and desirability of sixth forms. So allegations that the boys of Sir

Thomas Rich hurled obscenities at the quizmaster of a Radio One show for schools, "the disc jockey Mike Reid, and shouted answers from the audience to give their team an advantage could not have come at a worse time. The recording of the programme, *Pop of the Form*, was eventually abandoned.

Whether the behaviour of the teenagers was due to boisterous good spirits, or the bottle of white rum that had been circulating, is unclear.

The chairman of the school governors, Mr Ken Morris, said: "This is an internal matter. The headmaster and I have dealt with it as we saw fit."

Despite the boys' efforts, though, the grammar school lobby appeared to have won a major victory when, on Wednesday, the council, under pressure from Mr Baker, agreed to increase numbers in the threatened schools.

## NUT uncovers 'sexist and irrelevant' job interviews

Diane Spencer

Women applicants for teaching posts have been asked at interviews whether they are on the birth-control pill, according to the Bedfordshire branch of the National Union of Teachers.

The branch, which wants the local education authority to introduce effective monitoring of its equal opportunities policy, says many of the questions asked at interviews are sexist and irrelevant.

In addition to being asked whether they were on the pill, women were also asked what arrangements they made when their children were sick and "How could an attractive woman like you cope with boys?"

For Bedfordshire Council to call itself an equal opportunities employer "may have been rhetorical optimism," comments the report of a survey the branch conducted. Some interviewers clearly have stereotyped images of women teachers – they are not the breadwinners, therefore their careers are less important than men's and women have the sole responsibility for caring for children, it adds.

The report points out that contrary to popular belief all women teachers are not married with young families. In fact, most women teachers under 40 do not have children.

Neither is it true that women leave to have children very soon after they start teaching. Sixty-three per cent

have never had a break in service to raise a family. Those that have had a break in service, taught on average for six years before the break. The average break in service was five years.

And women are just as keen on their careers as men. There was no evidence to support the assumption that women, once married, lost interest and commitment to their work.

The survey showed that more than half the sample of women had applied for promotion during the past five years, compared with 75 per cent of men. But the report comments that a greater proportion of women are in primary schools where promotion chances are fewer, and the assumptions made about them and the nature of the questioning they have to endure does nothing to encourage them to apply.

In all sectors of schooling, the vast majority of women are on Scales 1 and 2 while most men are on Scale 3 and above. The number of men on more senior scales is disproportionately small.

"The preponderance of schools with male heads in control of an almost entirely female staff had led some pundits to nickname these institutions as 'harem' schools," it adds.

The report says the NUT will be monitoring the allocation of promoted posts in the new salary structure. It calls on the local education authority

## NEWS



Going solo: Diane Hunt, aged four, is the first girl to enrol with the 45 boys at Torquay's Kirkstead College since the independent school went co-educational in January.

## Call for girls-only science

by James Melkile

Mixed secondary schools should give girls a second chance to follow scientific and technical subjects by offering single-sex classes, the TUC said this week.

Such efforts to break the divide between traditional male and female studies would require changes in the Sex Discrimination Act, according to its new report on equal opportunities in education and training.

At present, schools may separate boys and girls where it can be educationally demonstrated that participation and attainment are increased in single-sex groups.

But the law demands equal access

and equal treatment. Therefore, schools cannot offer only to girls the opportunity to "catch up" years after they have made option choices at 13 or 14, ages at which they dropped subjects.

The TUC urges positive action to be allowed and calls for the spirit as well as the letter of the existing law to be more rigorously observed.

\*The Education and Training of Girls and Women – A TUC Report costs £1 and is available from TUC Publications Department, Congress House, Great Russell Street, London WC1B 3LS.

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## IN BRIEF

### Duke's remedy

The Duke of Edinburgh made a veiled attempt at the teaching profession this week in his presidential address to the Central Council of Physical Recreation.

In a list of measures to rejuvenate sport, particularly competitive sport in schools, he called for more curriculum time to be devoted to the subject. "It is too much to expect of teachers that they should be given to a national physical education service run in conjunction with the governing bodies of various sports," he added.

The university has had hard days before – under the marauding monks and when it had to flatter the Stuarts and survived. It has just seen an international fund-raising campaign and a violent attack on teachers.

### Statement fear

Many handicapped children have not been given adequate statements of their special educational needs, the House of Commons Select Committee on Education was told this week.

The National Association of Head Teachers said it had asked 400 special school heads if their pupils had been given statements, under the 1981 Education Act, in line with the provision available at the school rather than pupils' actual needs. The unpublished results of the survey show that 28 per cent thought this was often the case and 55 per cent said it sometimes happened.

### Subsidy plea

A special subsidy should be paid to schools in poor areas as part of a £650 million cash injection into services for children, according to a campaigning document from the National Children's Home.

The charity, which yesterday launched a "facilities" into the difficulties faced by deprived children, said next week's Budget should force a half penny cut in income tax and divert funds into children's services.

### Poly status plan

Local authority leaders are trying to head off the Government's plans to take control of the polytechnics and large colleges by rushing through an agreement on corporate status.

They were meeting trade unions and polytechnic directors yesterday in an effort to clear any remaining obstacles inside the institutions. They are bringing forward the next meeting of the committee of the National Advisory Body by a month to have the earliest possible debate on the final report of the good management practice inquiry, which will recommend corporate status for major institutions.

### Alcohol abuse

The Government-led drug education campaign is deflecting resources from the more pressing problem of alcohol abuse among young people, Mr Eric Bolton, senior chief inspector for schools, confirmed this week.

He told journalists at a seminar on drugs misuse, led by the Home Office minister, Mr David Mellor, that the problem of under-age drinking remained the most urgent concern for most youth workers.



In his *This Week, Next Week* contribution on television last weekend, Mr Kenneth Baker struck a rather different note from the one he had sounded in the Commons, and which Lord Belstead had echoed in the Lords. When the Teachers' Pay and Conditions Bill was debated, the Secretary of State stressed the interim nature of the consultative committee but he and his colleagues nevertheless firmly attempted to put a strict limit on the life of the new Act.

On Sunday, he tried once again to emphasize the temporary nature of this legislation and offered two options to be negotiated for the future – an independent pay review board with a no-strike clause, or collective bargaining with separate negotiations for heads and deputies.

A no-strike clause has now become essential if teachers are to draw back from the abyss they have been edging towards over the past 20-25 years. Strike action and deliberate disruption are corrosive of the professional ethic. It is simply not consistent with the first duty which teachers owe, not to a faceless local authority, but to their pupils.

The growth of unionism, as opposed to professionalism, is one of the causes of the debilitation of the public education service since the upsurge of militancy led by the National Association of Schoolmasters in the early 1960s. The accession of the big general unions to the Trades Union Congress was symptomatic of the retreat from the idea of a true profession; it marked the acceptance of the more overt organized self-interest which unions exist to protect and project.

But this deterioration did not occur of its own accord. It flowed from the sustained failure by the public authorities to pay teachers a decent salary and provide them with decent working conditions. Teachers have been exploited. Their residual professionalism has been turned against them.

The public education system has been woefully mismanaged by the politicians and the paymasters, who have joined in heaping the blame for their own mistakes on the teachers. We now have an education system which fails to meet any reasonable tests. Standards of attainment are lower than they should be for the great majority of pupils. Not only do students fail to do as well as many of their contemporaries abroad, they drop out earlier and they are more alienated.

All this rebounds on the teachers, who are held responsible for weaknesses in the education system which, as well as failing the pupils, lower the morale and the job satisfaction of all



Sign language: a dispensation is needed in which strikes and "working to rule" are no more

Stuart Maclure looks back at the lost opportunities, incompetence and mischief-making on both sides which have brought Government and teacher unions to the edge of the abyss, and argues that the next move is up to Mr Baker

## The price for peace in our time

involved.

The events of the past three or four years have brought many of these matters to a head. Sir Keith Joseph tried to tackle the symptoms of failure in education, while at the same time saving the very teachers whose help he needed to make his policies work. The long drawn-out attempt to negotiate a new pay and conditions deal reached a first climax in November 1984, with the package put forward by Mr Philip Meridale, the Hampshire Conservative, who then led the employers' team.

In what now look like a series of quite extravagantly foolish moves, the National Union of Teachers refused even to look at the Meridale package as the basis of negotiation. And with equal and opposite stupidity, Sir Keith Joseph cut the ground from under Mr Meridale's feet by attacking the plan as far too expensive and egalitarian. Yet this package was less than half as costly as the eventual deals which the

Treasury was forced to concede for Scotland, and for England and Wales.

It makes one weep to think of the sheer ineptitude of the Cabinet's behaviour at that stage of the negotiation – an ineptitude compounded by Sir Keith Joseph, who should have faced the facts of the situation. The NUT's position, too, was indefensible, were it not that the arrogance and the obstinacy of Sir Keith Joseph and his colleagues quite soon made the unions' recalcitrance seem quite statesmanlike. And, infuriating as it may be to those who believe there must be better ways of conducting our affairs, it was only the worst, most sustained, period of industrial strife in English, Welsh and Scottish schools that persuaded the Government, in 1986, to put up the kind of money which should have been on the table in 1985.

None of this would have occurred if the Cabinet had agreed to set up an independent inquiry for England and Wales to parallel the Main Committee in Scotland. But Sir Keith refused to look ahead, and saw himself sidelined and impotent as the Acas talks proceeded in circumstances which, all agreed, would end in tears.

The story to this point is of prodigious incompetence, a certain amount of mischief making and the incidental degradation of the teaching profession. The lion's share of the blame must rest with Sir Keith Joseph. He failed to grasp what was happening. Arrogantly, he assumed he could reject anything he did not like, and insist on all he desired without paying for it. Great as his personal qualities were, deep as his commitment was, he showed a culpable failure in his Section One responsibilities for the education of the people of England and Wales.

Why do governments – any government – get it wrong so often? When, in December 1985, the Government gave in to the Scottish teachers' utterly reasonable demand for an independent inquiry and set up the Main Committee, there was another missed opportunity.

Had an independent inquiry into teachers' pay and conditions in England and Wales been set up at the same time, events would have taken a very different turn. Instead, there was the patched-up agreement among a rump of the teachers' unions (not including the NUT) and the local authorities, to reopen negotiations under the aegis of Acas. But now the local authorities were led by Mr John Pearman, a Labour councillor from Wakefield who is uncommonly quick on his feet – too quick, in fact, for many on his own side – who set about getting an agreement with, or without, the acquiescence of the Secretary of State's representatives on Burnham.

The details of the negotiation are important, but much more important in understanding what happened is to recognize that, from the start, the teachers' and the Labour-led local authorities were seeking to do a deal which they knew would go beyond anything the Government had in mind. A figure of £300 million was already being mooted in Government circles at Christmas 1985, but Mr Pearman was quite prepared to push on higher because he knew that the odium of refusal would fall on the Government.

Moreover, quite legitimately, Mr Pearman – like Mr Meridale before him – reckoned that, between them, the teachers and the authorities could bounce the Government into going over the odds if only they could get a solid agreement. It was this which made the eventual decision by the NUT to join the Acas talks so important. (But not, of course, the NUT's rejection of the Acas proposal, or the opposition of the NUT to the Acas proposal.)

The Acas talks proceeded, therefore, in an unrealistic atmosphere in which the authorities reckoned they could simply disregard the Education Secretary's opinion and treat his representatives in Burnham as mere observers, even though the authorities could only afford to pay if the Government provided 46 per cent of the cost of any settlement.

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Sir Keith Joseph: aloof

But not all Sir Keith's errors can be ascribed to the hardliners at the NUT of the blame for simply refusing to continue negotiations on conditions of service when they walked away from the Meridale offer.

Mr Baker had to step in when the arrival of the Main Report precipitated decisions in the Cabinet, and it is difficult to quarrel with his determination to cut through the tangle and impose his own settlement. His structure is too hierarchical and could have been improved if, before Christmas, the NUT and the authorities had seriously sought a compromise. But seriously sought a compromise? The NUT's position was not a compromise, it was a demand. And Mr Baker, too, had his eye on the politics of it all.

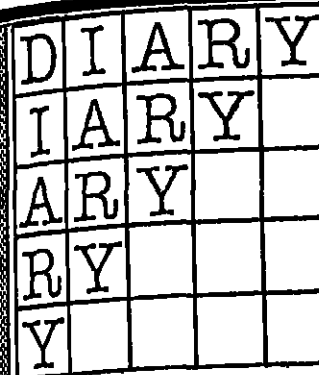
There are many teachers who are extremely angry about the shape of the imposed settlement, but it is what Mr Baker has done about Burnham that explains the latest vote for sanctions in the NUT and the NAS/UTW. Mr Baker attempted to explain away the vote as puerile in the extreme. It seems clear, however, that the union leaders had got themselves out on a limb. It was his illusion that rank-and-file teachers would be so glad to get the money that they would dismiss the union leaders, Mr Fred Jarvis and Mr Fred Smithies, roll over on their backs and invite the ebullient Secretary of State to trample on them. It is a surprise that this is not so, but it is resorted to the kind of tortured logical statistics politicians only believe in when they are really desperate.

What is needed now, however, is to put all this behind us and look ahead. If, as we have argued, the great need is for a period of stability in which the teaching profession can recover its confidence and that of its clients, it is quite essential to move to a dispensation in which strikes and "working to rule" are no more, and professional teachers can put their professional obligations first.

The new contract is a necessary and ambiguous step in this direction. It penalizes flagrant, unprofessional conduct, even if it also constrains the free flow of professional initiative. But an end to the strike weapon, *de jure* depends on giving guarantees to the teachers against the exploitation of their professional scruples – guarantees, in fact, which will remove the professional scruples that have put the board.

This is why Mr Baker's encouragement to an independent pay review board is so important. He has moved this far by a roundabout route, because he knows, like everyone else, that the bodies are anathema to the Prime Minister. But Mrs Thatcher is not enough to value the prize which has been striven for – peace in our time and schools front – and this is the prize that must be paid.

It is now up to Mr Baker to put forward a paper showing the way to the teachers' unions have joined with the authorities in advocating a pay review board. It is a kind of which will provide the unions with a new bargaining ground for their sterile dispute. Separate has also been necessary to the NAHT and echoed by Mr Baker. No doubt, given binding teachers' pay to work – after a fashion – be made at the expense of recurrent pay of institutionalized racism. But an independent pay review board would make a "no-strike agreement" a real possibility. It is up to Mr Baker to make his move in this direction. The next round of negotiations is ahead of him.



### Oxford vote race

Punters who thought the race for the chairmanship of Oxford University was between yesterday's men Ted Heath and Roy Jenkins should take a look at the MAs dished out at last week's degree ceremony.

Like Cambridge, that other seat of educational privilege, Oxford indulges in the ancient practice of selling MAs to its graduates. For the sum of £5 (plus college handling fee of up to £20) old Oxonians get not only the lodes of a master's degree – but also the chance to vote in what has probably become the dirtiest fight for the chairmanship this century.

The normal annual quota of MAs is about 180, but this year around 600 have been awarded – a third of them to former students of Queen's College, whose Master, Lord Blake, is also in the running.

So ungentlemanly has the scramble for votes become that Dr Mark Payne, rank outsider for the chancellor's job and a Birmingham GP, has dubbed this "the rotten borough election", murmuring darkly about large fees being laid on by candidates to woo the voters.

Dr Payne is leading the call for reform in the election of the chancellor and proposes a secret ballot, rather than the dogmatic taking place this week, which requires voters to attend in person. One person with a considerable interest in the secret ballot idea is the current president of the Electoral Reform Society – none other than Lord Blake.

### Blast from the past

Outraged, the Open University has just launched a new course in prehistoric conservation as part of its contribution to the European Year of the Environment. It is being run by the Centre for Continuing Education and is aimed at farmers, forestry workers and other land managers, teachers and anyone generally interested in the cause of conservation. Preservation of wildlife habitats will be a particular feature.

What makes it curious is that the newly-appointed director of the centre is Mr Gordon Dyer, who joined the OU as a technology staff tutor in the London region in 1978. Before that, he spent more than 28 years in the Royal Air Force, first as a navigator, then as a flight tester, administrator, trainer and manager. But his experience in conservation work began in 1987 – when he participated in Britain's H-bomb trials on Christmas Island.

### Left behind

As everyone who wants to know does know by now, the London borough of Brent is about to splash out £88,000-a-year on a new public relations unit, in an attempt to dispel the "loony left" tag it has earned from the hounds of Fleet Street. The council's recognition, as its recent advertisement for four PR officers acknowledged, the value of good presentation. And it certainly needs it.

You might expect, therefore, that some of the flak for all those disreputable stories about race spies and the McCollinrick affair would fall on the press officer who handles Brent's education issues, Mr Steve Carey. Not a bit of it. Far from being washed up, Mr Carey is going up in the world – to the City, to be precise.

He is leaving the people's borough to take up a post with city PR firm, Dore, Rogerson, where he will no doubt be handling lucrative accounts and merchant banks, anxious to smooth up their images in the wake of the recent Guinness affair. Clearly, the City's enterprise appreciates the difficulty he has had of trying to sell Brent's education policies.

### Acronym

Diane Spencer reports on a new DES drive to persuade teachers in all-white schools that they should adopt a multicultural approach to their work

## Missionary work in the highlands

"Do you want us to play hockey with turban on?" "I'm already multicultural, leave me alone."

These comments come from teachers in the "white highlands" of southern England who are being encouraged to embrace multiculturalism. And by all accounts they are not atypical.

Even in 1987, many teachers still feel that multicultural education is something that should only concern inner city schools.

The Department of Education and Science is, however, challenging this view by funding a series of in-service training initiatives that put across the message of the Swann Report – that the multicultural nature of Britain's society has implications for all children, including those in mainly white areas.

Last week 11 senior teachers from Dorset, Hampshire and West Sussex completed a DES-supported five-week course at Southampton University on "the curriculum post-Swann".

As well as studying curriculum developments in language, drama, maths, humanities and biology, and listening to case studies on racism, the Asian experience in Britain and teaching Caribbean literature, the teachers spent two weeks back at their schools working on projects to put their new-found knowledge into practice.

The projects included studies on



White children still associate Indian people with food and West Indians with sport and music

## Survey shows Tory meanness, says Radice

by Barry Hugill

Children living in Conservative-controlled local authorities are getting an inferior education, Mr Giles Radice, Labour's education spokesman, claimed this week.

Mr Radice said that the average expenditure per pupil in Conservative councils was well below the average for Labour councils in both primary and secondary schools.

He added that class sizes in Tory authorities were noticeably larger and that the bottom 20 authorities in a league table of nursery provision were all Conservative, except for Liberal-controlled Isle of Wight.

The claim was made after a Labour survey of schools' spending in England and Wales showed, according to Mr Radice, a wide variation in provision.

He singled out three Conservative authorities, Hereford and Worcester, Lincolnshire and Norfolk, for particular attack.

"These three councils demonstrate the uncaring attitude of the Tories both locally and nationally. They do not appear to realize the importance of investing in our children, and pupils are suffering as a result."

In 1986/87, Labour councils spent on average £11.40 more per primary schoolchild than Conservative councils and £100 more per secondary pupil.

Labour authorities were more likely to have lower pupil-teacher ratios than

children's images of ethnic minorities, a survey of second languages among pupils, questionnaires on the impact of multicultural education on the curriculum, developing a drama course and formulating a policy on equal opportunities.

Initial reactions from teachers varied from indifference to outright hostility, but some positive progress by the end of the fortnight was reported by those who had attended the course.

Mr Roger Lincoln, head of St Luke's CE primary school in Bournemouth, found his staff bewildered. "What's Swann?" they asked. Mrs Vidushi Ojha, a home-school liaison teacher in Crawley, said the hostility was "quite alarming". "I thought I was liked by everybody, then at the end of two weeks it was not so pleasant."

Mr Eric Dennis, head of humanities at Woodlands School in a white working-class area of Southampton, was regarded "as an alien". "They just don't see multiculturalism as a major issue."

His colleague, Ms Adessa Hazlett-Williams, head of the lower school, said the subject was greeted with sarcasm and cynicism at first, but by the end, it was at least on the agendas of departmental and governors' meetings.

However, both Woodlands teachers agreed that staff morale had been undermined by the prolonged pay dispute and the subject was unlikely to be given priority.

Even in schools with around 20 per cent black children, some teachers were reluctant to accept the idea of a multicultural Britain, one group member noted. "Black becomes invisible; they are waiting for the problem to go away."

The group was worried about nipping children's racial prejudices in the bud. It was clear from Mr Lincoln's survey that their stereotypes of black people stemmed largely from the media, and they were, on the whole, negative.

Knowledge of Africa was gleaned from Orson posters and *Blue Peter* appeals and was confined to pictures of starving children. The 11-year-olds associated Chinese and Indian people only with food and West Indians with sport and music.

Mr Jim Adair, deputy head of Gleanmoor School, Bournemouth, discovered that few of his pupils had set



Even in schools where one in five pupils is black some teachers are reluctant to accept multiculturalism

foot outside Bournemouth. "Even their idea of an industrial city is limited to *Coronation Street* and their image of London comes from *EastEnders*."

Ignorance must be countered with good, factual information, said Mr John Fisher, adviser on multicultural education for Wiltshire, who attended a panel discussion at the end of the course. "Teachers do that with every other subject but we don't do it with race."

Another participant, Mr Paul Hibbert, community relations officer for Southampton council for racial equality who used to work in Haringey, warned against complacency.

"In London you get a school with welcome signs in 16 languages, but in the classroom they have the same problems of underperformance as they

had 10 years ago." And there was still appalling racism in some staffrooms, he added.

But the Southampton group was optimistic this wouldn't happen in their schools. The headteachers among them said they wanted a multicultural or equal opportunities policy that was more than a package of words. The rest were confident of support, but added that parents and governors would have to be persuaded of the need for curriculum change – "a daunting, but not insurmountable task".

Dr Peter Figueroa, the course director, hopes to repeat the venture next year with DES funds. "We don't want it just to be a one-off," Mr Lincoln added. "Without DES back-up the initiative will fizzle out."

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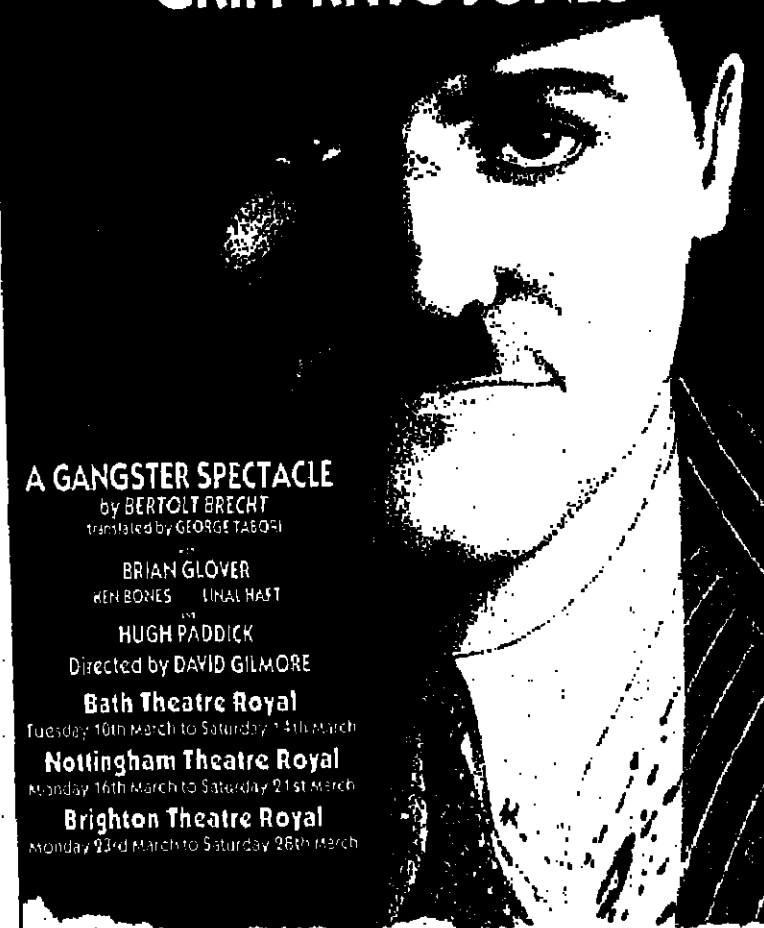
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## TEACHERS' PAY

Industrial action in schools resumed on Wednesday following national union ballots. Here and opposite *TES* staff report on the progress of the dispute and assess its likely effects on different parts of the country

## AMMA strike decision awaited

The Assistant Masters and Mistresses Association, representing nearly 90,000 teachers in state schools, announces next week whether it will add to the strike disruption which began closing schools once more on Wednesday.

The National Union of Teachers and the National Association of Schoolmasters/Union of Women Teachers, have embarked on a rolling programme of half-day walk-outs and rallies following big votes in favour of industrial action against the Government's withdrawal of their negotiating rights. AMMA has balloted members on a national half-day strike on March 24 and its leadership is considering whether it should follow the two other unions in withdrawing from appraisal. Sixty per cent of those voting must support the protest strike before it can take place, but the executive voted 75-0 in recommending the action last month.

AMMA has already joined with the NUT and NAS/UWT, however, in telling Mr Kenneth Baker, the Education Secretary, that they will only meet him about the 16.4 per cent pay package he is forcing on the profession after "consultation" if he agrees that direct negotiations can be restored in time for the April 1988 pay round and that the money for this year's rise could still exceed the £608 million limit set by the Government.

The demand for more cash is unlikely to succeed, but Mr Baker, speaking on BBC Television's *This Week Next* programme on Sunday, went further than he has before in spelling out "a better arrangement for determining teachers' pay" once the interim period of imposition was over.

"There are broadly two avenues. One is some form of independent review body with no-strike agreements attached or one for some form of collective bargaining and a separate position for heads," he said.

"Now, I think we should start talking about this as soon as possible. And I hope with those undertakings that many teachers will not indulge in the prolonged campaign of disruption."

Government spokesmen had previously indicated that future pay machinery was unlikely to be agreed before early 1989, at the earliest, and after guidance from the independent advisory committee on pay and conditions to be set up later this year.

Mr Baker's latest statements may mean the "breathing space" could be shorter. He certainly seems to have hardened up his views on several negotiating fronts, which is wanted by the National Association of Head Teachers but not the Secondary Heads Association or other unions with heads in their ranks.

Mr Baker sought to play down the size of NUT-NAS/UWT ballot majorities, saying votes had been cast before the details of his pay package were spelled out last week. He also said the way the ballot question was worded - asking members if they would strike and take action short of strike against the loss of negotiating rights - had distorted the results. But late-arriving ballot papers seemed to confirm hostility among the grassroots this week - and the teachers are hoping for another strong rebuff to the Government from AMMA.

The NUT figures announced at a press conference last Friday were 92,264 members in favour of the action, 23,277 against and 306 spoiled papers. This reflected a near four-to-one "yes" vote on a 62 per cent poll. By that evening the figures had risen to 99,334 (yes), 25,214 (no), 2,494 abstentions and 337 spoiled papers, and officials were counting more late arrivals this week.

The NAS/UWT figures were 54,462 in favour of industrial action, 9,319 against and 485 spoiled papers, showing nearly 85 per cent of the voters in a 58 per cent



poll behind the union leadership.

The lower turn-out is thought to result both from the union's shorter tradition of balloting members and its antipathy to the alternative pay and conditions package signed by local authority employers, the NUT and AMMA.

Nevertheless, late-arriving votes put the NAS/UWT figures to 55,189 (yes), 9,507 (no), and 496 (spoiled) by Wednesday.

The two big unions have still to announce other disruption which will last "months rather than weeks" unless the Government agrees to restore negotiating rights for next year. But they say new arrangements could be worked out in three weeks if Mr Baker showed goodwill. The unions are examining details of the contract Mr Baker is proposing for the profession, but refusal to cover for absent colleagues is among the most likely sanctions.

The withdrawal from all appraisal experiments, both nationally-run pilots and other local authority and school-based trials, was expected.

And, in spite of the walk-out, the Department of Education and Science this week went ahead with the appointment of two teams of consultants to assist the six pilot schemes as an indication that it thinks appraisal will

soon be back on the agenda.

Dr Ray Bolam and his team from the National Development Centre for School Management Training at Bristol will ensure the pilots provide a base for national guidelines, while Mr Howard Bradley and colleagues from the Cambridge Institute of Education will evaluate the schemes and provide an independent report to the national steering group of unions, local authorities and DES representatives.

The National Association of Head Teachers, which has been at odds with other unions over the last few months, may also advise members not to co-operate in appraisal while remaining ready to talk about broad principles.

The union believes it is essential that appraisal has the support of all teachers to work.

Meanwhile, an Irish teachers' organization warned at the weekend that any move by the Northern Ireland Education Minister, Dr Brian Mahoney, to interfere with the free collective bargaining traditions governing teachers' salaries and conditions of service in Ulster would be stoutly opposed.

"We will not stand idly by if our rights are removed as crudely and provocatively as has been done in England and Wales," the general secretary of the Irish National Teachers' Organization, Mr Al Mackle, told his union's annual conference.

The conference was also warned of "an obvious trap" whereby the current agreement to allow the Northern Ireland Salaries Negotiating Committee to retain its rights could be exploited to introduce a differential regional basis for salaries.

● The Joint Matriculation Board said this week that O and A level results for 1986 were not affected by teachers' industrial action.

James Melkile

## Labour sets 30-pupil class target

Labour aims to reduce class sizes to a maximum of 30 pupils over the next four years as part of a comprehensive plan to raise standards.

The exact cost of the proposal is uncertain but is said to be £250 million over two years, for extra books and equipment, more teachers particularly in key subjects and maths and physics, and new rights for parents.

More school building and maintenance would also result from attempts to boost capital investment by local authorities, thus providing more jobs for construction workers.

The plan also hopes to increase the number of infant and primary teachers in training and considerably further than the target of halving classes to 33 pupils agreed by Labour-led local authorities in

Labour's education and training pledge, page 13

teacher unions as part of the pay and conditions proposals refused by the Government - and left out of Mr Baker's final package.

The announcement by Mr Sir Radice, Labour's education spokesman, on Tuesday coincided with publication of a survey by the National Association of Head Teachers in staffing of primary schools.

This indicated that more than half five classes in a sample of nearly 80 schools had 30 children or more. Mr NAHT says that 52 per cent of all classes in the schools surveyed in January last year were oversized, and the union sets a class-size limit of 30 pupils in classes of more than one group.

Mr Radice, who was a guest speaker at an NAHT conference on recording education, also said that he hoped to improve nursery opportunities.

## Reluctant voters for new strikes

Teachers at the Bohunt School in Liphook, the heart of Hampshire's Conservative commuter land, are horrified at the thought of renewed industrial action. But they are so angered by the removal of their negotiating rights that they have voted almost unanimously to strike.

For union members at the school are likely to have supported Labour at the last general election, according to Mrs Pam Miles, the acting deputy head, Mr Colin Jackman, a Scale 2 English teacher and National Union of Teachers member, said: "We are not rabid lefties. We are a very conservative bunch of people who are getting extremely angry."

The school's staff realize that their action will probably be ineffectual. "It's a war of attrition. I can't see

HAMPSHIRE

people hanging on for long; teachers will drift back," said Mr Dave Slade, an experienced CDT teacher on Scale 3. But teachers at Bohunt feel they must make a token protest. "We can't just roll over and let our tummies be tickled," he insisted.

Like Mr Slade, many teachers see the loss of their negotiating machinery as the latest move in the gradual erosion of union rights which started with the miners and continued at OCHQ - the government intelligence centre at Cheltenham. "If we don't take a stand, firemen and the Civil Service will be next," said Mr Slade.

As a member of the Professional Association of Teachers, Mrs Ann Ault, a Scale 1 maths teacher, will be one of the few on the staff who will not take action. She is hoping that the Government will set up a replacement

for the Burnham Committee and is worried that some of her colleagues may be over-reacting to the imposed deal. However, like them, Mrs Ault believes the new pay structure provides little incentive for experienced teachers on Scales 1 and 2.

Bohunt School, an 11-16 community comprehensive, is only likely to qualify for five or six incentive payments of £500 for the basic scales. This will not be enough to reward Scale 2 teachers who are running departments, let alone attract teachers in shortage subjects.

Because of the high cost of housing in the area (a one-bedroom flat costs £30,000), the school has been trying to replace a CDT teacher for four terms. There are also vacancies for staff both in business and computer studies.

Mrs Miles does not think the £500 allowances recently announced by Mr Kenneth Baker, the Education Secretary, will staunch the flow either. And she is concerned that there will be nothing left over to reward good teachers on the lower scales, who are the most bitter about the new pay structure.

"Teachers on Scales 1 and 2 are furious and saddened that, after several years' teaching, they will be on the same salary as teachers who qualified last year," said Mr Graham Roff, head of humanities and the school's NUT representative.

Mr Jackman, whose views appeared to be typical, added: "I've had no holiday for five years and I can't afford to support my wife and family. My wife says I give more to school than to my own family. When you are paid peanuts for abusing your own family, it's too much."

Staff were also angry that the new



Scales of the problem: the NUT's Graham Roff (left) and Colin Jackman ponder the Baker package

conditions of employment did nothing to restrict class sizes or to increase preparation time. Many said that some of the stipulations, particularly the number of hours worked, were unclear. "The contract doesn't specify the duties which a headteacher can reasonably expect a teacher to carry out," said Mrs Miles. "Staff at some schools could be put at the mercy of an autocratic head."

Despite their anger, teachers are in despair at the prospect of further action just when the school has returned to normal. "No one wants to go

through that shambles again," said Mr Bob Soboy, head of creative studies and the school's representative for the National Association of Schoolmasters/Union of Women Teachers.

Staff are particularly concerned about fifth-year pupils, who have been affected by action since they were in the third form. Nevertheless, they believe that strikes harm the teachers more than the pupils, as they have to ensure that children catch up on the work they have missed. Last year's exam results were the best ever at Bohunt.

Susanah Kirkman

## East End Asian pupils still stalked by ghost of Mosley

Every war takes its toll of innocent victims. In Newham, the beleaguered borough on the fringe of London's East End, it is young Asians who are suffering as a consequence of the three-way battle between the authority, the Government and the teacher unions.

"War" is no light word to throw around but it is hard to think of a more appropriate term to describe the state of hostility which exists between the borough's large Asian population and the gangs of young fascist thugs who delight in tormenting them.

The torment takes varied forms - shouted abuse, attacks on youngsters coming from or going to school, the odd lighted rag shifted through a door. The council does what it can, like almost all authorities it encourages teachers to try to develop tolerance and understanding between different racial groups. But the East End has a long history of racial intolerance, exemplified pre-war by Sir Oswald Mosley and his Blackshirt movement and more recently by the National Front and the British National Party.

Mr Tony Chapman, head of Newham's Kensington primary school, estimates that 97 per cent of his pupils are Asian. And 75 per cent of them speak English as a second language, which means that they only use it at school.

And because of the pay dispute and a three-year-old disagreement between the teacher unions and the council over the provision of supply teachers, many of those pupils have found themselves at home when they should have been at school.

## NEWHAM

Only last week the National Association of Head Teachers advised its members in the area not to cover for teachers absent for more than one day and to send home children without a full-time teacher.

The NAHT action is retaliation for what it believes to be the council's failure to provide much-needed supply teachers.

There is an obvious need for supply staff because the local branch of the



Tony Chapman: fearful

National Union of Teachers will not allow its members to cover. On top of which, Newham is not an area that easily attracts teachers. Bad result - 16,000 pupils sent home during January.

Pupils sent home from Mr Chapman's school run a serious risk of being attacked by white youths, many of whom are loose on the streets because they have also been sent home from school. So bad is the situation, says Mr Chapman, that many Asian parents are now keeping their younger children off school for fear of attack.

But because most Asian parents go out to work they cannot look after the youngsters so the older, secondary school age, brothers or sisters, are kept at home to act as protectors.

It is a shocking, and depressing phenomenon, and Mr Chapman fears, it could get worse.

He is not too worried by the threat of half-day strike action now promised by the NUT and the NAS/UWT on the cynical, but no doubt justified, grounds that losing the odd afternoon's education is part of a Newham child's "way of life".

But he is scared silly that the action will escalate, that goodwill will be withdrawn and a bad situation will become a desperate one.

"We have teachers in Newham who after three years have no experience of preparing a report, attending a parents' meeting or taking part in curriculum development. If the dispute escalates the impact will be shattering."

Barry Hugill



Walking scared, Asian schoolchildren are frequently

## Militancy's bitter cup wins few supporters

Elland Road, the scene of past glories for Leeds United, will soon be the rallying point for thousands of Yorkshire teachers as yet another series of strikes hits schools.

It is an ironic choice of venue. Three years of on-off guerrilla warfare in education have devastated school sports programmes across the country. Nowhere is the long-term effect on children's sporting life more keenly discerned than at South Parade junior school in Ossett, Wakefield.

"If this disruption carries on, it will be the end of team football in schools. It's a shame because school football has been a proud tradition for so long - but I think it will all go," says the resident of Mr Glyn Taylor, the National Union of Teachers' representative who is responsible for PE and soccer at the school.

Whether the unions will get a good 'rate' at their Elland Road rally remains to be seen. Yorkshire teachers are determined as ever to secure the pay and conditions they believe the profession needs and deserves - and not on terms dictated by Mr Kenneth Baker.

The NUT has recorded a 75 per cent 'yes' vote to renew action, while the National Association of Schoolmasters/Union of Women Teachers' anti-Baker vote is around 80 per cent. But in the traditionally non-militant primary schools, feeling is not so evident.



Youngsters at Elland Road

Only two or three of the eight teachers at South Parade school will troop through the Elland Road turnstiles to register their protest. The imposed deal has gone a long way to placate - though not satisfy - a dispirited workforce.

Money is no longer the major complaint. "It is the imposition that we do not like," said Mr Taylor. "We have just got the Baker scales. They are not vastly different to the Axa agreement. The real problem is in the conditions. There is no mention of class sizes. We need to be pressing for class sizes down

to 25... teaching is a much harder job than it was 20 years ago."

If militancy does not loom large at the school, however, the picture is no different from the past three years. Whenever a strike call has been issued, only a few staff members have responded. That pattern is expected to stay the same. School sport, other out-of-hours activities and formal contact with parents in the evenings will, though, cease once again.

Like many other primary schools, however, the impact has been minimized because staff have been prepared to bend the rules over industrial action to protect their pupils. Staff meetings have been held during breaks and parents have been seen informally or during school time whenever the need has arisen. It is a conflict between professional and trade union loyalties.

Mr John Gaunt, the headteacher and deputy secretary of the Wakefield branch of the National Association of Head Teachers, is unhappy about the deal being imposed, particularly because it means teachers will lose negotiating rights. He is also unhappy about the lack of provision to cover for absent teachers for the first three days (Wakefield normally provides cover after one day). But his biggest criticism is the absence of provision for a minimum class size and guaranteed non-teaching time in primary schools.

Jeremy Sutcliffe

## TEACHERS' PAY

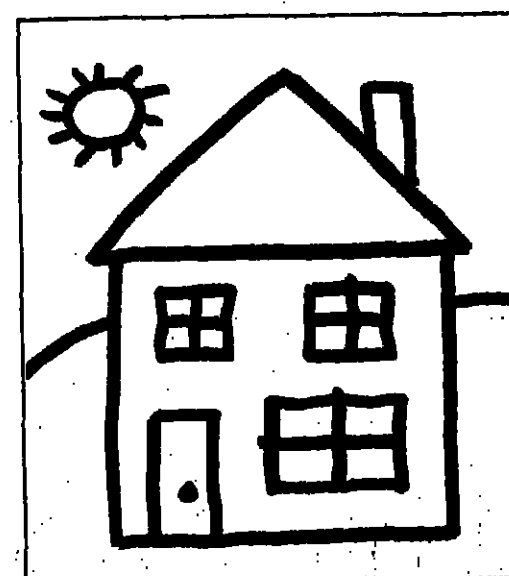
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James Meikle reports from the first of a series of conferences aimed at persuading firms to support teaching in shortage subjects

## Poor discipline threatens recruiting, says Rumbold

Lack of discipline in schools could undermine attempts to lure older people with mathematical, scientific or technical skills into teaching, Mrs Angela Rumbold, the Minister of State for Education, warned last week.

She told a conference examining ways of recruiting staff with shortage skills: "Teaching maths is very difficult and you need an attentive class of youngsters who want to learn."

They should not find that they were

"turned off" by what they found in school.

Mrs Rumbold made the remarks as she visited a conference in Washington, Tyne and Wear, organized by the Sunderland Science and Technology Regional Organisation, the first in a countrywide series asking companies to support teaching in shortage subjects.

She surprised some already doing such work because they felt the observations might merely confirm the views of industrialists reluctant to get involved until schools "sorted themselves out".

Mr Chris Marsden, BP's education officer, argued that industry had a responsibility to help, since indiscipline was a social, not a school, problem. "If we can make life more interesting for kids, we may help."

Mrs Rumbold welcomed calls for a national register of all those people trained to teach to help find men and women who may give the profession a second try.

In 1984, an estimated 23,000 people under 60 qualified to teach maths were not in schools.

But the crisis would have to be on local authorities first to scour their own areas and then exchange information.

● The Manpower Services Commission and groups promoting school-industry links are considering a marketing campaign to involve more companies in education.

Business big and small would be told that developing such links was in the national economic interest and would help their own commercial prospects.

Involvement could help recruitment, give a firm added status, many of whom were parents, and give vital experience and career development to employees through secondments, assistance with school projects, or other schemes.

Small local companies could also use skills of pupils and teachers in a range of activities from translation of business material in other languages to computer awareness.

The extension of the Technical and Vocational Education Initiative, which now includes every local authority except Kirklees, has widened the need to provide practical work-related experience.

School-industry enthusiasts also believe that the drive to ease the shortage of teachers in scientific, technical and business studies offers far more companies a golden opportunity to open up schools to outside ideas.



Bits and pieces: science staff recruitment heavily criticized

## 'Pathetic' career structure

Recruitment and career development in teaching are "pathetic", according to a former industrial manager who is researching ways of improving the quality and quantity of applicants.

Mr John Prescott, who was manager of BP's North Sea gas terminal at Easington, impressed Mrs Angela Rumbold, when he told the conference: "I would only put a teacher into a first appointment for a maximum of three years. I would then move him because teachers have to have different experience."

The Government has just set up a national unit to join the university and college "milk round" and sing the praises of a career in teaching, and is introducing appraisal, although industrial action may slow its arrival.

But Mr Prescott's advocacy of more job mobility went down well with Mrs Rumbold. She commented later: "You

are right about recruitment. You are absolutely right about career development. That must be done."

Mr Prescott and Mr Brian Lowe, a seconded headteacher, have started an investigation, backed by BP and Havereside County Council, into possible improvements in local recruitment of teachers, particularly in shortage subjects.

Mr Prescott later made clear that he expected regular job changing with authorities rather than between parts of the country, although that would continue as some teachers deliberately looked for vacancies elsewhere.

He suggested that a teacher should hold a first post for no more than two years, including the probationary year, the second job for no more than five, and the third for no more than five, and first headship for no more than 11 years.

Mr Lowe is less keen on such an approach, although in favour of appraisal, pointing to schools' need for continuity and commitment.

Mr Prescott is excited by the idea of recruiting more young people in scientific, maths and technical teaching in schools. He says persuading volunteers who have just joined industry to devote some of their time to the local school, say for the last three years of the job, would be valuable educationally, to the company and to the person concerned.

## Tax angers language schools

by Ian Nash

British language schools are losing a fortune in export earnings to foreign competitors because of a tax anomaly, the largest UK organization representing their interests has claimed.

The 400-plus commercially-run schools attract 300,000 overseas students every year. But half of the schools are owned by groups based abroad and are exempt from the 15 per cent VAT imposed on home-based schools.

"They can therefore cut fees by as much as £30 a course," Ms Mavis Mayo, general secretary of Arels-Felco, the

association for recognized language teaching schools in Britain. Based here, they would also have to pay for stringent monitoring and inspection by the British Council.

"They can undercut us with unfair competition, while giving absolutely no guarantee of quality," said Ms Mayo, who wants VAT abolished or the laws changed to bring all schools into line.

"We find it extraordinary that VAT is charged on educational services. It is also counter-productive for the long-term benefits of this country," But

repeated appeals to Customs and Excise and the Government have failed on deaf ears, she said.

More than 200,000 French students travel to the UK each year to study English courses but barely one-third are with Arels-Felco member schools. One small West London organization claims that it brings in 10,000 students here annually.

British Council-recognized schools recorded 750,000 students in 1985, and the 1986 figure is likely to be higher. But this represents only one over half the market.

## General Synod set to restrict governors' role

by Bert Lodge

The Church of England General Synod has taken a further step towards ending the traditional autonomy of church school governors that has been the envy of their county school colleagues.

Under a new measure a board of governors will have to seek the consent of its diocesan education committee before any change may be made in the status or character of a church school or in any alteration of the premises.

At present, the country's 44 committees are limited to an advisory role, and are frequently unable to influence governors, of whom two-thirds at voluntary-aided schools are nominated by the Church.

The Venerable Alan Chesters, the Archbishop of Halifax, said in proposing the measure: "We must ensure that individual schools are not in

isolation from each other, and they should not be allowed to be picked off one by one by a local education authority which is opposed to Church involvement," he said.

Though the measure was referred to a revision committee and still has some way to go, its progress will be welcomed by local authority administrators, whose dealings with church schools are complicated by the absence of a corporate voice.

The revision committee will consider limiting the composition of diocesan committees, from now on to be known as diocesan boards, to 25 members.

The governors of an aided school are responsible for conduct, curriculum and religious education. They also have a say in the appointment of the headmaster and the selection of the staff.

## Owen calls for pupils' voice

Dr David Owen, the leader of the Social Democratic Party, wants pupils to have a new ruling body for the education system.

Pledging Alliance support for a general teaching council, Dr Owen said a lay membership of parents, pupils and industrialists should elect directly-elected teachers.

The council would be responsible for registering qualified teachers, regulating cases of professional misconduct, monitoring in-service training, and advising on teacher pay.

Speaking at the London School of Education last week, Dr Owen said the council would contribute to progress in schools.

Unions and other educationists have already agreed the formation of a council in England and Wales, but Dr Owen's proposal would be a radical departure from the current system.

## What is Prestel? A simple introduction

Prestel is the world's first public videotext service. It was invented by Sam Fedida in 1973 at British Telecom's research laboratories at Martlesham Heath in Suffolk.

Sam Fedida started his work by formulating ideas for the introduction of a mass information system using the existing telephone network. From this concept of Prestel gradually evolved. With a team of four researchers, Fedida spent 18 months developing the system; examining how to produce the necessary software economically and very importantly, how to make the system very simple to use.

In 1974 the project team were ready to demonstrate a prototype working system. The full system was launched on a trial basis in 1979 and as a public service in 1980.

Prestel is now part of a British Telecom division known as British Telecom Enterprises. This division includes other well known services like Yellow Pages, Telecom Gold, Radiopaging and Cellular radio.

### The Service

Prestel is now used by tens of thousands of customers both in business and at home; large businesses, small firms, farmers, financial institutions, hotels, high street shops, banks, travel agents, schools, colleges and private homes.

The information on Prestel is supplied both directly by Prestel, and by hundreds of independent organisations called Information Providers or IPs. These include public bodies such as the British Library, Central Office of Information and Health and Safety Executive, educational organisations such as the Council for Educational Technology (CET), Schools Curriculum Development Committee (SCDC) and the Department of Education and Science, major companies such as British Airways and ICI, and other well known names such as the Stock Exchange, Lloyd's of London, Time Out and the Consumers' Association. Some of the IPs offer specialist services for business

customers, such as CitiService, which provides information on stocks and shares, commodities and world money markets.

### Easy to Use

Customers find Prestel a quick and very simple way of getting the continuously updated information they need, and soon discover that it is a powerful two-way communications medium, that lets them send and request data, as well as just receive information.

Prestel is very easy to use. The information is organised into pages or frames, a screenful of information. To call up an item from the thousands available you simply press the numbers on the keyboard. No complicated codes are required.

Each page contains 24 lines of up to 40 characters, which makes them easy to read even on relatively poor quality low resolution display monitors. Pages can include simple graphics and up to seven colours, which helps make them look attractive and interesting.

### A Sophisticated Computer System

This simplicity should not fool you into believing that the technology behind the service is also simple. Far from it. It is a highly sophisticated technological system with a user interface deliberately designed for ease of use. Fedida was well aware of the needs of business and professional users who want to search for relevant information themselves, but do not have the time to contend with complicated controls and protocols. The information must be delivered rapidly, in the right form, at the right time, and to the right person.

The Prestel system consists of a network of computers linked together by high speed data links. In addition, multiplexors sited at local nodes across the country allow customers dialling the local node to obtain Prestel for the cost of a local phone call, without paying trunk call charges.

There are three types of computer centre operated by Prestel - Inform-

ation Retrieval Centres (IRCs), Update Centres (UDCs) and Message Centres (MCs). Currently the network consists of one UDC in London, linked to one MC and six IRCs spread over the country. Customers have access to two IRCs, to provide uninterrupted service in the event of temporary failure of one computer, network congestion or special maintenance demands. The system is available 24 hours a day every day of the year.

### A Gateway to other Systems

Prestel Gateway was introduced in March 1982. It is a facility which allows any conventional Prestel terminal to be

connected, via Prestel, to an external private computer. The link between the Prestel network and the external computer is provided by either a private data line or through the packet switched service (PSS), British Telecom's public data network.

Gateway is a means of adding the more powerful features of many in-house computers to those offered by Prestel. Gateway is an extension of Prestel, introducing the potential for information retrieval and data processing on an increased scale, and for greater interaction with users.

There are currently over 50 external computers linked in to the Prestel

network. Of particular interest to educational users is the gateway to the Open University Sperry Univac mainframe computer, providing access to the ECCTIS courses guide and the NERIS resources information service. Other services using gateway include airline booking systems, direct on-line quotations from major insurance companies, and the Homelink and Bank of Scotland home banking services. Some gateway services provide very specialist business applications, and are restricted to certain customers only - such as airline booking systems restricted to ABTA registered travel agents only. Others are open to all Prestel customers.



Children at Furze Down school in Buckinghamshire log on regularly to Prestel. Norman Ward, headmaster of the school says that "Prestel is our lifeline to the outside world".

## NERIS on Prestel

NERIS, the National Educational Resources Information Service, is now open to Prestel Education customers. The service is funded by the Department of Trade and Industry and was recently launched by the minister, Mr Geoffrey Patten.

NERIS aims to bring together information about teaching and learning resources from a wide range of sources. The database currently holds information on around 3000 resources, but this is due to expand to up to 50,000 over the coming year.

Access to NERIS is included in the subscription to Prestel Education, so schools and other educational establishments on Prestel can receive NERIS at no extra charge.

## Understanding Prestel

Prestel is not a single service. It is a collection of educational, specialist and general databases.

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SIGNPOST careers information  
NERIS educational resources

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- subject guides to Prestel  
- project ideas  
- classroom applications  
SEND special needs database  
SCHOOLS TELESOFTWARE

### DIRECTORIES

- A-Z of educational information  
- A-Z of educational users on Prestel  
- A-Z of educational IPs

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The new tariff is only available to schools, teachers' centres and LEA advisers. Further and Higher Education colleges and other educational establishments will continue to be eligible for the standard education tariff of £80 a year plus 4p per minute time charge. Schools, teachers' centres and advisers may also remain on the standard tariff if they so wish.

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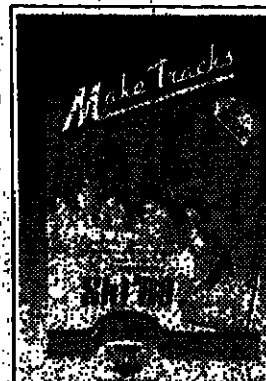
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Earlier this year it was being predicted – not for the first time – that the Inner London Education Authority was on the brink of financial disaster because of the Government's continuing refusal to give it a block grant. But last Friday the authority avoided the drop yet again by means of a dangerous budgetary juggling act. Barry Hugill explains how the feat was carried off

## Slipping the noose

The first task of any journalist assigned to write a "background piece" is to check the cuttings file. With luck the story will have been written several times before and much hard work can be avoided.

Sure enough, the bulging ILEA file is a repository of fascinating information. For example... in what year was the authority in grave danger of having to discontinue its education provision because of the parsimony of central government? When did the authority last go cap in hand to the Education Secretary demanding more cash to prevent an almost total breakdown in the service?

The answer, of course, is 1982 and 3 and 4... and most recently last Monday. One wonders at times why it bothers. In the past six years London ratepayers have not received a penny in block grant, the cash that central government gives to local authorities to help pay for essential services.

The ILEA councillors annually put their case to the Education Secretary who listens politely before telling them that it is their fault, not his, that they are denied grant aid.

They don't get the money because year in, year out, they spend more than the Government says they ought. The more a local authority overspends on its government-imposed limits the more money it loses in grant. And, in the ILEA's case, the time came when the overspending was such that there was no grant at all.

It is a vicious circle. Because there is no Government grant the ILEA has to find all of the money from the rates to pay its teachers. As the largest education authority in the country it has the highest number of teachers and because of London allowances they come more expensive.

Other local authorities receive up to 47 per cent of the cost of education through block grant which, or so the theory has it, leaves them with a sufficient amount of cash from rates to provide a reasonable level of education provision.

But the ILEA has such a large salaries bill that if it were to set what the Government considers a reasonable rate it reckons it would have very little left over to do all the other things that it wants to do.

And that is where its second major

problem arises. Not only has the Government taken away the authority's grant – it has put a cap on the amount of money it can raise through the rates.

This year, Mr Kenneth Baker has ordered, with the full force of the law behind him, that the authority must restrict its rate precept to 77.25p. And that means that if it continues to spend at its current rate there would be a shortfall of £102 million by this time next year.

There are a few people in the London Labour Party who believe that that being the case, the authority should simply carry on as normal regardless of the shortfall. The problem with that approach is that it is illegal. Councillors cannot set a budget that they know they cannot afford. If they do, they can be fined and disqualified from office.

The last thing that Mr Kinnoch wanted in an election year was the ILEA doing a Liverpool mark 2 and last Friday its ruling Labour group voted to abide by the law and set a balanced budget within Mr Baker's precept maximum.

Does this mean then that Mrs Morrell and her colleagues have accepted Mr Baker's case that no harm would



ILEA: MORTGAGING THE FUTURE

come from some judicious pruning of the service? Of course it doesn't.

But neither does it mean that the much-publicized cut that the ILEA said would be necessary if the Minister did not help them will take place.

There is a sense in which the ILEA leadership has for some years annually cried "wolf" only to announce later, usually on the eve of the budget meeting, that methods have been discovered of "preserving the service".

This year is no exception. Major cuts will be avoided by use of what the



Critics say that any benefits going to today's pupils are at the expense of tomorrow's

authority's finance officer, Mr David Riggs, calls "financing changes" – more usually referred to as creative accountancy.

Creative accountancy is not necessarily an evil although the Government frowns on it. There is some sympathy among local government finance experts, few of whom are politically on the left, for the plight of many authorities who have had their central government grants cut.

In January the Audit Commission, a body not usually associated with radical ideology, produced a report which

sympathetic government would not allow the horrendous cuts to be imposed that will prove inevitable unless the Exchequer is prepared to restore the lost grant.

It is a gamble for two reasons. It is perfectly possible that Mrs Thatcher will be returned for a third term of office. But even were she to lose there is no guarantee that a Labour government, especially a minority one reliant on Alliance support, would bail the authority out.

It is true that Labour promises to end rate-capping and leave it up to local authorities to impose as a high a rate as they wanted. It is also true that it would scrap the penalty system that now results in the ILEA's loss of grant. It is open to doubt, however, that the level of grant that it would provide would be anything like enough to allow the authority to continue spending at its current rate.

The problem with creative accountancy is that by "saving" money this year you lose it next year, and the year after. Like all mortgage agreements, there is interest to be paid.

Thus by raiding, for example, the building fund the authority will lose some £800,000 a year in interest earnings. And the cost of "borrowing" £30 million this year is estimated to be about £10 million a year for a further four years after 1987/88.

Thus, in the long-run, creative accountancy not only depletes the amount of cash held in reserve by an authority, it adds extra costs that have to be met in subsequent budgets. Even leaving aside the impact of inflation it will in future years cost the ILEA considerably more each year just to stay afloat.

Critics of the ILEA in the Conservative and Alliance parties, and some within the Labour Party, say that it is dishonest to pretend to be defending the interests of pupils when you know full well that in the not-too-distant future the money will effectively run out. Any benefits going to today's pupils are at the expense of tomorrow's, they argue.

There are important disagreements between Tories, Alliance supporters and Labour right-wingers over the number, and nature, of the cuts that

could be made.

At the risk of over-simplification, the Tories are critical of the whole direction of ILEA policy. They believe there are too many teachers, that County Hall is top-heavy with administrators, that too much time, money and effort goes into the authority's famed initiatives on race, class and gender.

The Alliance and the Labour Right are, on the whole, sympathetic to the attempts to improve the educational opportunities of ethnic minority pupils and girls. They believe that the Hargreaves Report on secondary schools, the Fish Report on special education and the Thomas Report on primary provision are important and sensible documents that point the authority in the right direction.

But they share the Tories' view that the Inner London teacher unions have too powerful a hold over the authority. And they argue that if costs are to be brought under control, the ILEA must more effectively manage its teaching force.

They want compulsory redeployment of teachers and the authority has now decided that that is what they will get. But Alliance members of the ILEA are sceptical that it will happen.

It is undoubtedly true that for some years the authority has avoided a wage war with the unions, despite mounting evidence that there is serious over-staffing in some schools and equally serious shortages in others.

It is also true that despite the official ILEA policy that teachers should provide one-day cover for absent colleagues, many refuse to cover at all. Yet the ILEA has consistently refused to take disciplinary action against them, arguing that it is a problem of the unions, primarily the National Union of Teachers, rather than the authority.

Opposition politicians are sceptical about Labour's intention to make cuts because, they say, economy measures that will bite next year have to be implemented this year.

This is a point taken up by David Riggs in a briefing paper produced last week's budget meeting. Planning for an academic year takes place a long way in advance, he explained. Because the authority had made offers to pupils and students about courses for the year starting in September it would be difficult to introduce cuts now.

And it is a point that Dominic Brennan, the young SDP leader on the ILEA, is now making. If the authority is serious about managing its resources it has to start making difficult decisions now, not on the eve of next year's budget, he says.

To which the Labour leadership replies that that is exactly what it is doing, pointing to the plan for compulsory redeployment of teachers. The evidence of the cutting of staff that such statements have led to is many times before. Parents and pupils are for real. What can be done

Geraldine Hackett reports on a dilemma facing the DES over its Aids booklet for schools – published last Friday

## Change to chastity is the Church's message

Children in Catholic schools may not get the full message about the means of preventing the spread of Aids as spelled out in the booklet from the Department of Education and Science.

The Catholic Schools Service says the information on condoms and their use as set out in the booklet was not likely to be used in Catholic schools. Responsibility for the content of lessons such as sex education rests with the governors of state-aided church schools.

Mr Mike Power, deputy secretary for the Catholic Schools Service said: "I have not had time to study the content of the Aids booklet, but on first reading I think it unlikely that parts of it will be used by teachers."

"Sex education in Catholic schools has to be spelled out in terms of the sacramental nature of matrimony. Sexual intercourse is a key part of marriage."

In some Catholic schools, the information may not even get to teachers. Monsignor Nicholas Coote, assistant secretary of the Bishops' Conference, said it was possible some heads would dump the leaflet in the wastepaper basket.

"I haven't read it, but we would expect the subject of Aids to be handled in accordance with the Church's teaching. The Church doesn't approve of contraception."

"The Church would say that the way to check the spread of Aids is through abstinence and monogamous marriage, and when we are talking about changing people's behaviour it may be that what we should be advocating is chastity and not encouraging a change in behaviour in the use of condoms."

The comments came in the wake of last Friday's publication of the DES

**The way to check the spread of the disease is through advocating monogamous marriage**

MGR NICHOLAS COOTE

booklet about Aids, which officials hope will be used by schools throughout the country.

The DES's dilemma stems from a clause in the 1986 Education Act which gives governors the right to decide on the content of sex education lessons in schools. County school governors could, therefore, follow the Catholics' example.

In a recent statement in the House of Commons, Mrs Angela Rumbold, Minister of State for Education, agreed with MPs that governing bodies would be able to dictate what was taught in sex education lessons. However, the DES argues that the topic of Aids could be considered as basic health education – rather than sex education.

The booklet, *Some Questions and Answers*, warns that there is a theoretical risk of transmitting the infection by French kissing, but gives the OK to love bites, as long as the skin is not broken. It points out that homosexual and bisexual men are particularly at risk if they have anal intercourse and it

also suggests there is a risk from oral sex. The leaflet says condoms provide a degree of protection against the infection.

There are thought to be some 200 schoolchildren infected with the Aids virus and three known cases of the full-blown disease in schoolchildren. Schools have been told they should not take blood or cell samples for science demonstrations.

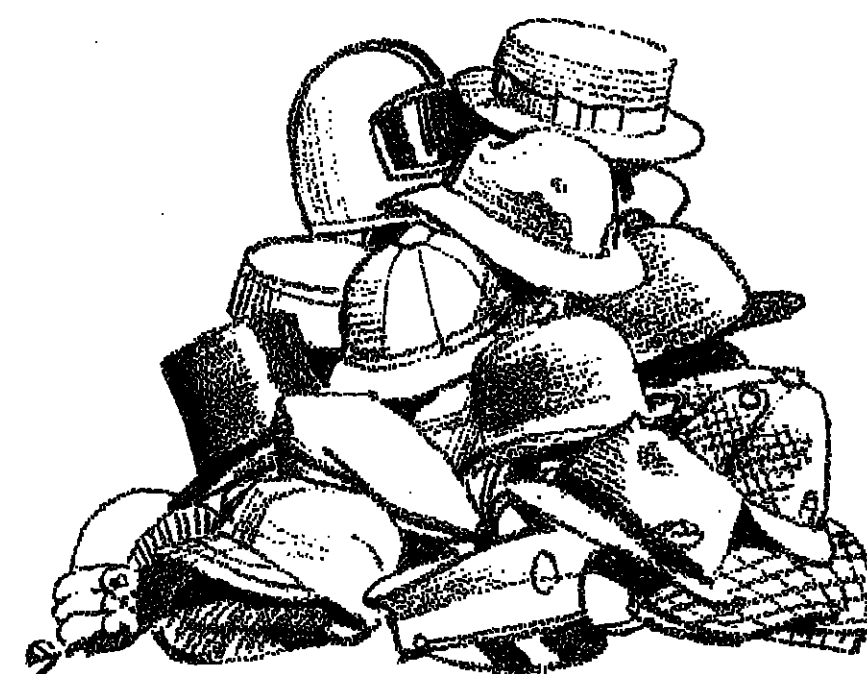
One million copies of the leaflet have been printed for distribution to schools, colleges and youth clubs.

*Aids: Some Questions and Answers* is available from the DES Publications Despatch Centre, Honeypot Lane, Stanmore, Middlesex HA1 7AZ.



Fun with numbers: pupils from Firs special school in Smethwick took part in the Sandwell maths fair along with more than 70 of the borough's primary, secondary and special schools. The fair at Churchbridge teachers' centre encouraged schools to share and enjoy mathematical ideas and activities across the curriculum.

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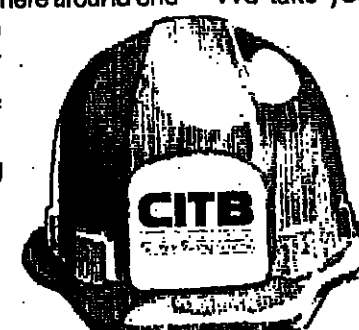
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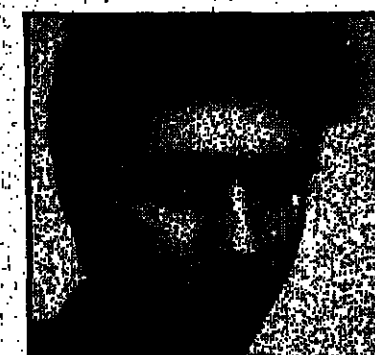
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David Riggs reporting in creative



Dominic Brennan's difficult decisions



## PRIMARY

## Class in a book of their own

by Sarah Bayliss

Former pupils of an inner-city primary went back to their old school this week to collect copies of a book they helped a teacher to write.

Park Walk primary, at the unfashionable end of King's Road in Chelsea, London, held a special assembly for parents and children to mark the publication by Hamish Hamilton of *Our Class*, price £4.95.

The book was written by Rachel Warner, who teaches English as a second language at a neighbouring comprehensive, Hurlingham and Chelsea. She spent one afternoon a week with top juniors in class 4C for two terms last year.

The book gives an unselfconscious and realistic account of the life of 14 children. They described their family, their tower block flats, the languages they used and religions they practised at home, and what they liked doing best with their friends.

"The predominant feeling they gave me was that they had a wealth of experience and knowledge which it would be easy to ignore in school if you didn't draw it out," said Rachel.

Some of the children spoke a language other than English at home - Portuguese, Spanish, Twi (from West



Rachel Warner gives a copy of the book to one of her pupils

Africa, principally Ghana, Bengali and Arabic - and spent some of their time at supplementary school learning the Koran, for example, or Hebrew. Many played together in an after-school play centre until their parents came home from work.

"Something like this helps to remind us of the richness of the lives children bring with them to school," said Mr Peter Rees, the head. "The most important thing the book did was to give them a very positive image of themselves."

Apart from the time she spent in school, Rachel also visited the children's homes to obtain permission from their parents to write the book and to learn more about their families.

Interviews were taped. Children had the first draft read to them for correction.

Eugene O'Hene is one of the pupils in the book. He recently arrived from Ghana and was living with his grandmother, Charlotte, on the World's End estate. "She came to fetch me when my mum died, so that she could look after me. When I first went to school I couldn't speak any English. I thought the others would laugh at me. But they didn't and Eugene had settled down at school. He said he enjoyed maths most of all."

Eugene, now a pupil at Hurlingham and Chelsea, brought his grandmother to the book launch. "I've bought two extra copies and I'm sending them back to my mother," he said.

*Our Class* by Rachel Warner is published by Hamish Hamilton as part of "The Way We Live" series price £4.95.

## Hours of science lessons wasted, say researchers

by Ian Nash

Much of the time spent teaching science in English primary schools is wasted, evidence in a major study to be published this spring suggests.

A National Foundation for Educational Research survey found little indication of a positive relationship between pupil achievement and the time spent in science lessons.

Nor was there a significant relationship between achievement and the amount of science studied by primary teachers in initial training. "The strategies teachers adopted appeared to be more important than their initial scientific background," say the researchers.

Almost all the primary schools participating in the study included some science in their curriculum, and most teachers said they spent more than an hour a week on the subject. But the dramatic rise in primary science since the critical HM Inspectorate report of 1978 does not appear to be in the most constructive areas of practical work and individual learning.

Questionnaires, classroom observations and a range of tests on 4,000 10-year-olds revealed consistently high achievement among those doing most practical work. But only one-third said they did experiments "often", says the report.

Whereas four out of 10 pupils reported copying notes from the board

Labour's PETS scheme to double spending on reskilling workforce  
Shadow Cabinet plans £1.25bn training drive

A two-year plan to double expenditure on training in manufacturing industry is at the centre of Labour's new programme for the modernization of training and post-16 education. The programme, approved by the Shadow Cabinet last week, will be published on Thursday.

The manufacturing training drive is part of a package of measures which would cost around £1.25 billion a year. They include:

- 75,000 adult traineeships for the unemployed;
- 100,000 places on project-based training for the adult unemployed;
- 75,000 traineeships for young people; and
- 75,000 extended training/work experience places for young people.

The measures for the adult unemployed and young people, which will cost £750 million after allowing for off-setting savings on dole benefits and a reduced demand for the Youth Training Scheme, were part of the £6 billion jobs package announced by Labour this week. But the plan to re-skill the manufacturing industry workforce is not included in that announcement, because it is not aimed at the direct creation of additional jobs.

The plan has one clear and overriding objective - to play a crucial part in saving what is left of Britain's manufacturing.

The party's leaders believe, from the overwhelming evidence produced by Government agencies and other sources, that rapid action is so vital that, initially, the taxpayer may have to find most of the £500 million a year which is needed to double the amount companies are currently spending. Present Government spending on training those in jobs, which takes second place to schemes to reduce registered unemployment, is small.

Although Labour intends to take powers to impose a training levy on industry, Mr Barry Sheerman, the shadow minister responsible for training, hopes that within two years many firms will be so impressed by the results of the extra training that they will be prepared to pay for most of it themselves without much need for coercion.

To encourage and monitor the expansion of training in both the manufacturing sector and the rest of employment, there will be a statutory requirement for firms to set up PETS - partnership education and training teams - representing management and workers - to audit training needs and plan programmes. Another tier of PETS will bring together local authorities and area and regional Manpower Services Commission bodies, while at

national level the MSC will be made "more responsive and accountable".

The Labour policy statement - which in successive drafts has had to run the gauntlet of a TUC bureaucracy whose flag is forever pinned to the MSC's masthead - will signal that it is time to start rolling back the MSC from its dominant role in technical education, and give local authorities much more say in training. Labour promises to restore to the local authorities responsibility for technical education in schools and for all work-related further education, which presumably means that it will take TVEI out of the MSC's hands and end its control of a quarter of non-advanced FE funding.

The traineeships for young people promised in this week's jobs plan are part of a range of education and training provision intended to provide a foundation scheme for all 16 to 18-year-olds which Labour is calling "Training for Life".

It will include an improved version of the present two-year YTS scheme - which Labour says has too little education and training content - modernized apprenticeships, and full-time education for both A level and vocational courses.

The draft of the programme prepared last week - not necessarily the final version which was going to the printers today - speaks of providing "a common identity for all young people" with a more equitable system of income support.

Those who do not manage to get jobs after their two foundation years are not going straight into higher education will be able to stay in education, training, or work experience until they are 20. At the same time, Labour intends to make it much easier for people of any age to enter or return to higher education, whatever their qualifications.

Labour is particularly keen both to develop better schemes of accrediting learning at work or on training schemes, and to secure a comprehensive system of credit transfer. It wants to establish a national council for courses and assessment which will lay down criteria, accredit validating bodies and issue students and trainees with credit profiles. The council, working closely with bodies like the National Council for Vocational Qualifications and the universities, will take over responsibilities for A level courses, which Labour plans to reform and broaden.

Essential to the whole plan, says Labour's education and training team, is the development by local authorities of tertiary networks based on tertiary colleges - singled out for particular approval in the programme - FE colleges, and schools, together with skillcentres and training workshops. This will give youngsters access to every kind of qualification, including A levels.

The programme commits Labour to raising standards generally in the schools by assessing a national core curriculum at the same time as providing resources by rebuilding and repairing schools and libraries, and training and supporting teachers.

Labour also regards as vital two other measures. The first is to strengthen HM Inspectorate, and to merge it with the new MSC Training Advisory Service. The other is to improve intelligence - possibly by setting up an independent research agency which would also have the job of working with the education service, of ensuring that courses, standards, and training are properly developed and monitored.

## SCHOOL TO WORK



Crash course: students and teachers taking part in a TVEI media studies exercise at Lincolnshire's Gainsborough FE college literally threw themselves into the work, as our picture testifies. Teachers from schools in the county's TVEI consortium joined 250 students for a day of running news agencies and press photo services, TV and radio stations, electronic information services, and an opinion poll. Pictured setting off on the bumpy road to a journalistic career are Tony Spriggins (with camera) and Keith Brown. As always, the villain of the piece is a teacher, Fiona Green.

## PROFESSIONAL ASSOCIATION OF TEACHERS

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PAT calls upon all teachers to reject industrial action at this time

Will strikes change any of the following three things?

- The Teachers' Pay and Conditions Act?
- The new salaries and conditions of service being introduced for teachers?
- The abolition of Burnham and establishment of an interim advisory committee?

The answer is no in each case. So will strikes change any of these next three things?

- The quality of education available in schools in 1987?
- The level of parental support for teachers?
- What ordinary citizens think of the profession?

The answer is yes in each case, but very much for the worse.

Here is what PAT is committed to doing at this time:

- Ensuring that teachers are paid their increase as soon as possible - a letter has gone to every CEO in the country to that end.
- Encouraging teachers to adopt a responsible attitude to contractual conditions of service (they will be based upon conditions agreed in recent ACAS negotiations).
- Promoting new discussions to provide effective negotiating arrangements in the future.

Sir John Wordie, Chairman of the Burnham Committee, says of the three years during which the interim advisory committee is scheduled to exist:

"Use to the best advantage that period to produce a really good form of collective bargaining."

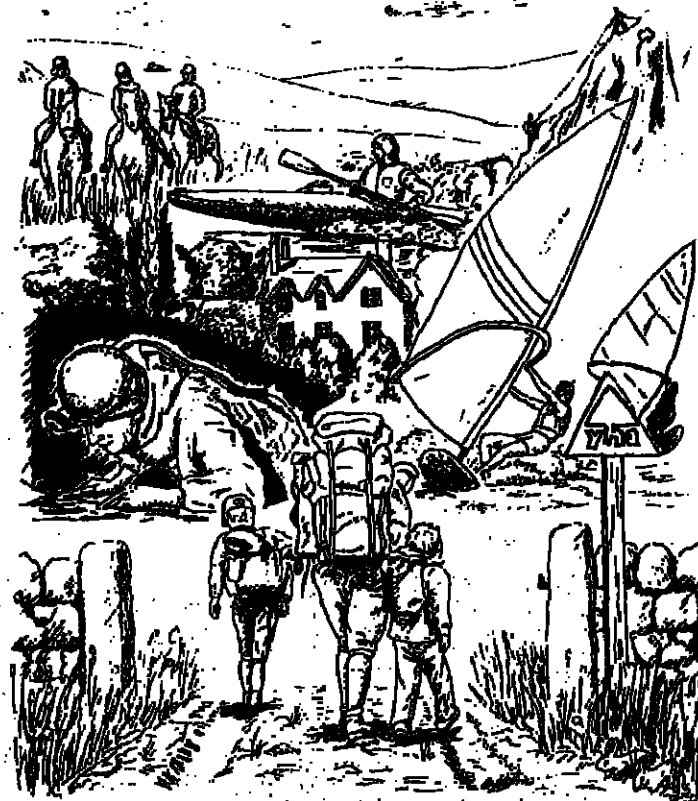
Teachers should be getting on with that rather than planning disruption.

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Children's (Part-time) Day, Evening, Weekend, School Holidays, Summer, Christmas, Easter, Bank Holidays, etc.

## Playboard - now who will care?

A significant proportion of my working life in Gingerbread over the past 12 years has been spent trying to raise debate and increase awareness of the needs of young school-age children "out of school hours" - both at local and national level.

Having experienced caring for two young children as a lone parent, I became personally aware of the effects of the poverty trap. Being unable to take paid employment to earn more than state benefits is not just a matter of financial improvement, it involves a restoration of pride, self-confidence, and a feeling that you have choices.

I discovered that my lack of choices had a significant effect on my children as my isolation, depression and frustration took its toll on our relationships. The biggest factor restricting my choice was an almost total lack of out-of-school care and my inability to find a job during school hours.

Eventually, through my involvement with a local Gingerbread group in Keighley, West Yorkshire, I took part in establishing an out-of-school care scheme, alongside a day nursery.

As a group, we quickly discovered that, while numerous statutory safeguards existed for under-fives provision, no one was responsible for making provision or setting standards for the over-fives. We also discovered that this age-range of children was badly served by the State for many reasons which gave them opportunities to develop through play.

Some research we conducted in 1981

## OPINION

showed clearly that, of the numerous local authority departments with some specialist role for children of this age group (maintaining playgrounds, dealing with vandalism, youth clubs, and so on), none expressed a desire to become further involved nor were their different responsibilities either coordinated or comprehensive.

It became increasingly clear that a primary focus was necessary for the play needs of young schoolchildren.

By the time I had transferred to working at national level, it appeared that a Government initiative was about to assist in pushing in exactly this direction. I refer to Playboard.

Along with many others working in this neglected area, I was excited by this major step forward - which was accompanied by the appointment of a minister for play - and regarded it as a major opportunity to influence policy-makers to improve the understanding of the developmental benefits of good play opportunities.

After three years' work by Playboard and some significant local changes in establishing new departments for play, the current minister has decided to demolish Playboard and give the Sports Council responsibility for play.

My questions to those responsible

are: Why have you taken this step - because Playboard's advisory body is not aware of any good reasons?

Who does the role and remit of the Sports Council bear any relation to the needs of young schoolchildren?

How will the hard-fought for specific focus for play and related services be maintained in a body as large as the Sports Council?

How can the £700,000 allocated for play in a total Sports Council budget of £37 million signify that play has any importance?

Maggie Smith is national day officer for Gingerbread.

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## University of the Air in search of updraught

### JAPAN

Barbara Casassus tunes  
in to the broadcast  
education system

Japan's University of the Air, now approaching its third year of operation, is not the resounding success the authorities had hoped.

Only 2,300 undergraduate students enrolled in the country's equivalent of Britain's Open University last April, about 8,000 fewer than for the first 12 months, and prospects are not much brighter for this April's intake.

One of the problems is that the courses are only available within a 20-mile radius of Tokyo, where many other study opportunities exist. Other likely reasons for the poor response, according to some observers, is that the university is not promoted enough, even though demand is growing in Osaka and the southern island of Kyushu for courses to be made available there.

This spring, the network will be enlarged slightly, adding a cable TV link and a study centre in Tokyo's neighbouring Nagano prefecture (county).

For the moment, there are six study centres, where full-time four-year bachelor of arts students must undergo two hours a week of classroom instruction to supplement four hours of television and radio broadcasts and five hours of study. Admissions have exceeded the quota to accommodate as many applicants as possible.

The liberal arts department, the university's only faculty, offers courses in life sciences, industrial and social studies, and humanities and natural sciences. Students may enrol for a year, a term or for as long as it takes to earn enough credits to begin a degree course.

This year, 17,000 students were enrolled, with almost equal numbers of men and women. The oldest is a man of 84. Among degree students, men outnumber women among the under-35s, whereas the opposite applies to the 35-55 age group. Most are office workers or bank clerks. The unemployed, housewives, civil servants and small business owners are also well represented.

Enrolment fees range from 3,000 to 15,000 yen (£12-£60) and tuition costs up to 93,000 yen (approximately £390) a year for full-time courses, much less



Most students are office workers or bank clerks

than regular universities. The annual budget stands at nearly 7.7 billion yen (£32 million), of which the Government provides more than 80 per cent. The teaching staff now totals 269, of whom 72 are full-time, and those figures are set to increase to 303 and 78, respectively, by 1988. The number of subjects taught is also expanding, from the original 105 to 238 this April and to 270 next year.

The university took 15 years to fruition. Opposition in and outside the Diet (Parliament) to its establishment was strong and enabling legislation was thrown out by MPs twice.

It is still criticized on several counts. Although run by the university's autonomous foundation, it is accused of being a vehicle for Government propaganda.

Members of its administrative council are appointed by the Education Ministry and, opponents point out, the economics syllabus ignores Marx theory completely. Furthermore, a Japanese employer's preference for recruiting young graduates, they say, has led the university to spread its coverage to become an important part of the higher education system will depend to a large extent on Government finances.

A committee has been formed to draw up a second plan from 1988 while the aim is to increase the number of universities with which it has credit transfer agreements from the present five private institutions.

## Reagan postpones the great asbestos clean-up

### UNITED STATES

When Congress earmarked \$50 million (£23.3 million) last year to tackle the asbestos problem in American schools during 1987, many administrators heaved a sigh of relief. Help was on the way at last.

But they rejoiced too soon. The money has not yet been paid out, and now the Reagan Administration is trying to claw back all but \$2.5 million.

An estimated 31,000 American schools serving about 15 million children, need to remove asbestos, which can cause cancer, if inhaled.

There was indignation on Capitol Hill last week when the Administration's decision was announced. Mr. Frank Lautenberg, co-sponsor of the Asbestos School Hazard Abatement Act, which designated a total of \$700 million for the work over a number of years - denounced Mr. Reagan for "insensitivity" in trying to balance his budget on the backs of schoolchildren.

Another Democratic Congressman, Mr. Thomas Luken, accused the Administration of "sabotaging the law". The withholding of funds needs

most unlikely to get. However, because of the timing of the move, the savings are likely to be made. The Environmental Protection Agency, which was to have begun distributing the money early this year, is now retaining the funds until the issue is settled in Congress.

Win or lose, the money can only be made available by early summer, and only for those schools which applied last year. There is an eight-month bureaucratic delay between applying for an EPA grant and receiving it, even without political intervention.

Schools will be unable to make plans for asbestos removal during their summer break, which is the only time when the work can be done because of the danger to children from the dust.

With the exception of those schools which can afford to go ahead without federal help, it now seems that the great asbestos clean-up will have to wait until 1988 at the earliest.

## Israel faces new austerity measures

Israel is planning huge cuts in next year's education budget which threaten a drastic reduction in standards.

Even President Chaim Herzog, who addressed the National Parents Association convention in Jerusalem last week, stated that the education system was in danger. But he stated that his political stand on the issue.

Cuts of 44 million shekels (£13 million) have been imposed on the Education Ministry by the Treasury.

The austerity plan to deal with the current budgetary crisis includes:

- firing 5,500, mainly elementary school teachers;
- closing 146 schools serving 100,000 children and transferring them elsewhere;
- reducing hours of learning by one and a half hours per week;
- cutting 100,000 shekels (£30 million) from the Education Ministry's budget.

Meanwhile, the Education Ministry is seeking a supplementary budget of 100 million shekels to improve schools. Funds will be allocated to construct new classrooms as well as to schoolchildren are learning in temporary or rented buildings.

## Undecided over ultimate Abitur

### WEST GERMANY

The Left and Right are  
wrangling about the  
eventual form of  
the A level equivalent,  
reports Paul Bandelow

The West German principle of nationwide validity for school-leaving qualifications is in doubt following the renewed failure last month of regional educational ministers to agree on the future form of the *Abitur*, the A level equivalent.

The issue at the forefront of the debate is how traditional the exam can remain while still meeting the needs of a rapidly changing working world, and the extent to which vocational elements can be introduced into sixth-form syllabuses without sacrificing academic standards.

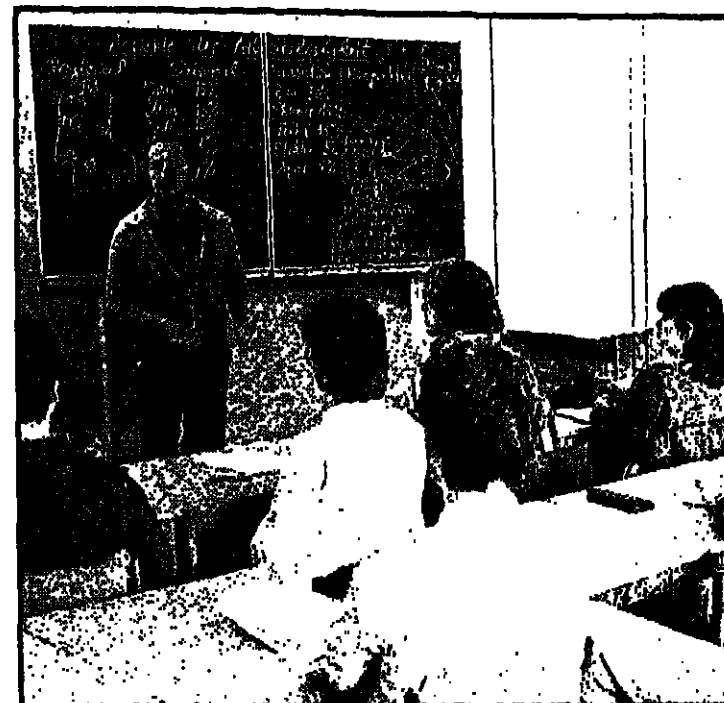
The standing conference of regional education ministers, the KMK, met to hammer out a compromise between the Conservative CDU-governed states, which favour a return to a more classically academic *Abitur* as a general foundation for university specialization, and the Socialist SPD areas, which believe a broader, more flexible exam would better prepare most sixth-formers for their future careers.

The CDU position, put forward at the conference by Baden-Württemberg's Education Minister, Herr Gerhard Mayer-Vorfelder, seeks to restrict subject choice, reintroduce compulsory topics such as German or maths, and so give the *Abitur* more of the nationally uniform character it had before the sweeping reforms of 1972.

The SPD view, advocated by North Rhine-Westphalia's minister, Herr Hans Schiewer, is that the strict division between "head and hand" in West German education must be broken down with the help of school-leaving qualifications flexible enough to cover a variety of career directions.

The debate has revived controversy over new approaches to school-leaving qualifications, such as that of North Rhine-Westphalia's *Kollegschule* experiment, which allows sixth-formers to acquire a "double qualification" - a combination of *Abitur* and apprenticeship - which gives access to both higher education and a profession.

In an interim compromise reached last April, the Conservative states



Sixth-form exams no longer a one-way street

agreed to recognize the *Kollegschule Abitur*, while maintaining serious reservations about its educational standards. That recognition is now once again at stake, with the CDU demanding that an extra year be added to the sixth-form course to avoid the danger of what they describe as a "discount" qualification.

North Rhine-Westphalia has signalled that it is not open to blackmail on the *Kollegschule* issue, and if necessary will forgo national recognition of the new qualification rather than renounce attempts to open up the *Abitur*.

A failure to agree on the make-up of the exam could limit school-leavers' choices of higher education or career to those available in their own state. Frau Dorothee Wilms, the Federal Educational Minister, warned last month that, if comparable standards could not be secured among the regional states for sixth-form syllabuses and qualifications, the universities could not be blamed for introducing their own admission examinations to establish the educational level of applicants.

On a broader level, the present row

reflects widespread concern about the future role of the *Gymnasium* (grammar school) and the function of the *Abitur*. According to Herr Dieter Wunder, chairman of the country's largest teacher union, the GEW, the *Gymnasium* is facing a reform of similar magnitude to that at the beginning of the century when the Latin grammar school had to open its curriculum to the natural sciences.

Today's new challenge, he believes, is for the *Gymnasium* to incorporate elements of vocational training and for these to be reflected in the *Abitur*. Herr Wunder points out that nearly half of grammar-school leavers with the *Abitur* are now opting for vocational training courses rather than going straight to university.

This is the equivalent, he claims, of going through the sixth form twice - once at the *Gymnasium* and once at a vocational school or college - and represents an unacceptably long transition from school to career, especially if students later go on to degree courses.

The changing role of the *Abitur* was highlighted in January in a report

published by the HIS university information service. This claims that sixth-formers are now overwhelmingly concerned to make a good career start after leaving school, rather than to join the "graduate class" as they would have done 20 years ago.

The *Abitur*, the study says, is no longer a one-way street to higher education, but more of a "traffic island with exits leading in different directions".

This reflects both the growing proportion of school-leavers with the *Abitur* - from roughly 5 per cent 25 years ago to 22 per cent last year - and an awareness of widespread graduate unemployment, which is likely to worsen in the next decade. The number of graduates will increase by 2.8 million by the end of the century, but only 800,000 existing graduate jobs will become vacant through retirement.

A further demographic trend underlying the *Abitur* debate is the drastic fall in school rolls. In North Rhine-Westphalia, the most populous state, the school population fell from 3.4 million in 1975 to 2.7 million in 1985, giving rise to fears for the survival of the tripartite structure of secondary education - grammar, comprehensive and technical schools - and with it the continued existence of the *Gymnasium*.

In the growing competition for a dwindling number of pupils, advocates of the *Gymnasium* see comprehensive, and especially experiments of the *Kollegschule* type, as a threat.

The degree to which popular feeling on this issue can be mobilized was demonstrated by a petition in support of the tripartite system, organized in North Rhine-Westphalia during the run-up to January's general election. It collected 1.3 million signatures, even though the state's 82 comprehensives are massively outnumbered by 650 grammar schools.

In February's unsuccessful meeting of the KMK, Baden-Württemberg's Herr Mayer-Vorfelder, said that "the German *Abitur* is a seal of quality" and must be preserved as such. In response, North Rhine-Westphalia's Herr Schiewer warned against declaring something to be of lower quality simply because it is beyond one's own experience. The KMK meets again in April in a further bid to reconcile arguments which in fact are not only about quality, but quantity as well.

## Promise of a future for history

### ZAMBIA

The declining popularity of history in the face of the growing popularity of science subjects among secondary school pupils is worrying Zambia's history inspector from the Ministry of General Education and Culture in Lusaka.

Mr V M Tembo, the inspector, has sent out a fervent appeal to school heads to impress on pupils the advantages of taking the subject.

"Very few pupils make it in the sciences. So why not give them a broad base that can assist them in various subjects?"

"I know that history study involves much reading. This is good and it is part of intellectual discipline. History learning also involves collection of material, classification, analysis and forming conclusions. All this is important."

The circular adds: "It is nearly impossible even today to plan for our economy without a sound knowledge of history. I therefore appeal to you to encourage your pupils to offer this foundation subject."

A detailed listing of course requirements for various degrees at the University of Zambia is also given in the document to show the relevance of history for those wishing to follow degree courses such as law, social work, public administration and education.

Mr Tembo lists "an overwhelming number of occupations and jobs that require a knowledge of history", including researcher, archivist, journalist, dramatist, evangelist, magistrate, politician, educationalist, economist, radio announcer and police officer.

The history syllabus for the Zambia School Certificate includes both African and European history and the percentage of passes in the subject has consistently been below that in most other subjects.

Pupils wishing to obtain a Grade 1 pass (over 75 per cent) in a subject have little or no chance of doing so in history. This is one reason why many candidates opt out of history in favour of subjects where a better mark is likely.

## Opening doors to dyslexics

### DENMARK

Ten per cent of Denmark's population suffer from dyslexia, but there are only six specialist state schools to help teenagers with the problem.

The *efterkoler* are non-examination residential institutes for 15 to 18-year-olds, catering for 500 dyslexics.

At Noerback school, near Randers in east Jutland, historians and psychologists, Mr Poul Anker Moeller, and a staff of 16 teachers work with 69 pupils. Extensive use is made of tapes and gramophone records of the spoken word, as well as oral techniques, and there are training programmes for faster reading.

"The pupils have to be encouraged to be aware of their handicap - to be open about it and not ashamed," Mr Moeller says. They must be given confidence to overcome their limitations, through self-realization and the development of their own literacy potential and skills. There is nothing stupid about being word-blind."

The special courses for dyslexic teenagers, which last between two and three years, include ordinary curriculum subjects. They are kept deliberately short to prevent pupils becoming isolated from the outside world. Many lead successful lives in a wide range of careers in which the written word is not important, such as dentistry and engineering.

Christopher Follett

## Please can we go to Thorpe Park, Miss!



You'll always get a resounding "yes please" to the suggestion of a visit to Thorpe Park!

Somehow, kids get to know about the Park and are eager to go!

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## CLASSROOM RELATIONSHIPS

## Growing together

Anne Krisman

In the past, it had always seemed to me that being a youth worker knocked spots off being a teacher. It stood to reason; you worked with children who wanted to be there, you could develop informal relationships with them and there were no oppressive structures to hold you back.

It also seemed attractive to be called "Anne" instead of "Miss" (or "Mum", as the first years tended to do, absent-mindedly). For a somewhat despondent teacher, youth work was the ideal.

Or rather, that's what I thought before I tried it. Admittedly, it was only a night a week in the local youth club, yet it was enough to give me a taste of the set-up I had yearned for.

My first shock was that youth clubs had assemblies. Ours was called "Chummy Time", although it was, to all intents, an assembly where our youth leader told the children what was going on in the club. There was strict control. "If you speak, I'm prepared to send one of you home and make an example of you," he belated.

When it came down to it, the informal relationships I had been looking for seemed to be very superficial. The youth workers were there to provide table-tennis bats and to facilitate a good evening's entertainment.

There were children who were happy to sit and talk to us, but it was rarely reflective. They were there to enjoy themselves and to meet friends.

The free atmosphere meant freedom of speech and I found myself listening to unsavoury sexist comments

by the boys about the girls. The experience of being in a youth club was surprisingly draining. I felt like I did when I was a probationary teacher; unsure of my role and responsibilities and worrying if the noise level was getting too high or not.

My limited experience of youth work gave me fresh insight into life at school. It's clear that there are two elements of the school day; timetable lessons and everything that happens out of those confines.

There are the break-time visits from pupils who want to tell you about EastEnders, children who bring in pop-star posters for their wall display, warm greetings in Punjabi in the corridor.

There is the sense of a narrative of relationships; seeing children progress and grow and understanding their behaviour in the context of what you know about them.

Why is it that school relationships seem deeper than those in an informal set-up? I have found that there are two sides to this. First, the seemingly oppressive structure seems to produce shared understandings between teacher and taught. We are similarly bound into the school structure and look for ways of getting through the day. Our position may not be equal but for most of us, we are there because we have to be.

And second, despite sociological studies that describe pupils as "open war" with teachers, there is something special about the relationships that grow from working together. Of course, there are always children in our working-class comprehensive who are prepared to take teachers on. Yet there are many who have respect for anyone who treats them properly and teaches well.

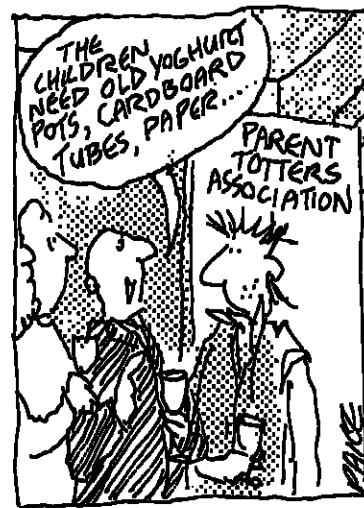
Lesley, a fourth year said: "One thing I can't stand is teachers who don't explain the work to you." I am sure that every teacher has an example of a difficult pupil who works for them alone and produces wonders - a relationship that has grown from a mixture of work, respect and trust.

There is more to relationships with young people than being called by your first name. Youth clubs do not have a monopoly on knowing young people as individuals. Let us stand back and take a detached look at the positive side of being a teacher. We may not have table-tennis bats, disco music or coffee bars, but we do have something more valuable.

Anne Krisman teaches in London.



## TALKBACK



## SALVAGE

## Totting up

Maureen Scratchard

In posh areas, they are called rag and bone men; here we call them "totters", the people who go all around the district looking for anything unwanted that might be useful. They come to mind particularly as I assemble my various plastic bin bags ready to start school at the end of my week's holiday.

I'm feeling rather pleased with what I've managed to scavenge. Hundreds of cardboard tubes, yoghurt pots, cardboard boxes, all dutifully collected for me by my neighbours. Lengths of yarn, all shades, rescued by my husband from the local carpet works. Offcuts of card and shiny paper begged from the long suffering manager of a greetings card manufacturer, who is besieged daily by local teachers. I could go on, but the list would be all too familiar to primary school teachers everywhere.

What a nuisance we teachers have become, continually begging and pestering people going about their daily lives. Why do they put up with us? I'm sure if my solicitor went asking for free paper on which to do his office work, he'd get an unprintable answer. Quite right too. Yet, not once has anyone told me to push off. They take it for granted that "totting" is part of a teachers' job.

It's become like an acquired occupational disease that I can't rid myself of. Only yesterday I met an unsuspecting man who told me he was a joiner by trade. Really! Have you any offcuts I could go on, but the list would be all too familiar to primary school teachers everywhere.

Maureen Scratchard is a teacher at Littleworth Infant School, Barnsley.

## THOUGHTS INSPIRED BY PHASES II AND III, OF

## Emotion recollected in sterility

Rosemary Booth

I had this urge to enlarge on  
The current pandemic of jargon  
Rephrasing what anyone knows  
In sufficiently turgid a prose  
Is enough to create an impression  
Of fluent and facile expression:  
It can't matter a snippet of thread  
That nobody knows what was said,  
Nor is it especially cheering  
To suspect it wasn't worth hearing.  
It is no very difficult thing  
To become a Pierian Spring  
To spout from the mouth such a flood  
Of "in-words", all lucid as mud.  
Jargoneers' brains must be plastic,  
They use words as knicker-elastic  
Which adapts to all contours and sizes  
And covers whatever arises.  
Jargoneers never talk . . . they all verbalize,  
They don't mow the lawn, they deherbalize.  
Their facts are not facts . . . they're data,  
Kept in banks . . . vice computer-pater.  
Jargoneers never drink, they must socialize,  
To imagine is always to empathize.  
They don't teach, they inculcate skills,  
(Which sounds like suppositing pills)  
Don't tick, positively reinforce work  
And prep is commuted to "coursework".  
We're on a course getting wearier  
While they obfuscate on criteria.  
While the kids go untaught, we go spare  
And listen for what isn't there.  
However, one thing'll stay just the same,  
When this fops, we'll get the blame . . .

not  
the jargoneers.  
They'll  
weaselword their  
way out  
of  
all responsibility  
for  
anything . . .

Rosemary Booth is head of history at Guernsey Ladies College.

## CAREERS IN CAREERS

## Hope is a distant memory

David Fleming

paper headlines about dole figures and enflaming legislation aimed at lulling and making life more difficult for the already down-trodden.

From day to day, life is not so bad. There's plenty of time for reading, writing and enjoying the countryside. It's only when thoughts turn to the term future that I see the arduousness of my position and the urgent need to get started in a career.

My hopes of a career in the service are becoming a distant memory as my thoughts and efforts turn to areas of employment, for better or worse. But next time I hear of an unemployed person starting a business, throwing a brick through a Job Centre window, I maybe won't approve, but will understand something of what made him do it.

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## FEATURES



## Bac to the future

The new A level review committee should be considering a broader approach along the lines of the International Baccalaureate, Alan Smithers and Pamela Robinson argue

In response to mounting criticisms of GCE A levels, and the changes made necessary by the introduction of GCSE, the Government has announced a small and independent review committee. While radical reform appears to have been ruled out at this stage, the committee ought at least to take a look at different ways of tackling sixth-form studies.

But what are the alternatives? One such is the International Baccalaureate, which has been running successfully at a small number of schools in this country since the 1960s and over 300 schools worldwide. As one approach to a broader sixth-form curriculum, it is well worth considering.

The issue of balance versus specialization is not a new one. Nearly 30 years ago, C P Snow warned of the developing gulf between the arts and the sciences, and of the dangers of a system which produced "educated young people ignorant of science". The need for a broader range of studies is now widely canvassed, but how is it to be achieved?

The Old Schools Council over the years produced a whole series of proposals including Q and F levels, N and F levels, and I level, and each in their turn has been rejected.

At present, the main device for bringing breadth into the curriculum appears to be general studies, but whether this is intended to be integrative, complementary or compensatory is not entirely clear. We now also have Advanced Supplementary (AS) levels, and have yet to see how they will fare.

Probably there will never be complete agreement on what constitutes the ideal sixth-form curriculum. But something along the lines of the International Baccalaureate could provide a meeting point. Although like A levels it offers a framework for a two-year programme of study for the more able in the 16 to 19 age group, it differs fundamentally in intention and design.

It is aimed at providing a broad education with sufficient flexibility of subject choice to suit individual interests and abilities. Subjects are organized into six groups and it is expected that a student will take one from each:

Group 1: Language A, the student's first language, including the study of selections from world literature;  
Group 2: Language B, a second modern language;  
Group 3: Study of Man in Society; history, geography, economics, philosophy, psychology, social anthropology, organization studies;  
Group 4: Experimental sciences; biology, chemistry, applied chemistry, physics, physical science, experimental psychology;  
Group 5: Mathematics; mathematics, mathematics and computing; mathematical studies, mathematics with further mathematics;  
Group 6: One from the following options:  
(a) art/design; music; Latin, Classical Greek; computing studies;  
(b) an approved school-based syllabus.

Group 7: A third modern language, a second modern language, or a subject of the student's choice, subject to the approval of the International Baccalaureate.

The IB, under the auspices of the International Baccalaureate Organization, is a programme of study which is designed to provide a broad and balanced education for students aged 16 to 19.

The students usually take three subjects at higher level and three at subsidiary level, but four at higher and two at subsidiary is possible. This two-tier arrangement allows students to select subjects at a level which reflects their own preferences and capabilities. For example, a student who tended towards the humanities might opt for higher levels in English A, French B and history, and subsidiary levels in music, biology and mathematical studies. A science specialist might take physics, chemistry and maths as "highers" and economics, English A and French B as "subsidiaries".

In addition, the diploma involves an externally-assessed extended essay in one of the subjects of the IB curriculum, a course in the theory of knowledge and weekly community service and/or aesthetic activity designed and monitored by the school.

The recommended teacher-student contact time for "highers" is 240 minutes per week and for "subsidiaries" 150 minutes per week compared with 320 minutes for A levels and 160 minutes for O levels.

Each subject is marked on a scale from 1 (very poor) to 7 (excellent), which avoids the narrow B to D hump of A level gradings. To be eligible for a full diploma a student has to gain a minimum of 24 points. Compensation between subjects is allowable, including between "highers" and "subsidiaries", although there are thresholds.

Up to two bonus points can be scored on the extended essay and one on the theory of knowledge course. On occasions, students do achieve a maximum of 45. The award of a diploma is dependent on satisfactory aggregate performance, but there is also the possibility of certificates for individual subjects.

With the introduction of AS levels, we are perhaps moving some way in the direction of the International Baccalaureate, but it must be remembered that AS levels involve a depth of study equivalent to A level, differing only in the range of content. They are not in this sense at an intermediate level. The change in name from "intermediate" to "advanced supplementary" was to emphasize this fact. And, of course, in the present A level system there is no means of ensuring breadth of study.

The IB, under the auspices of the International Baccalaureate Organization, is a programme of study which is designed to provide a broad and balanced education for students aged 16 to 19.

Baccalaureate Office in Geneva, has been adopted in whole or in part by 18 institutions in this country, mainly international schools, but also comprehensive, sixth form colleges and technical colleges. But its effectiveness in this context has never been fully evaluated. In 1979, the Schools Council funded a one-year exploratory study into the extension of the IB into British schools and colleges conducted by David Wilkinson, then head of science studies at the United World College in Singapore.

The study concluded that the IB is a viable alternative to the present A level system and that it is suitable for the "average" A level student. The diploma is recognized by British universities as an entry qualification: 84 British universities and other institutions of higher education made offers to 520 IB students from 69 schools in 1986 and Wilkinson offered some evidence that those with the IB do as well, if not better, than those entering with A levels. He also found a higher correlation between O level results and subsequent IB performance (+0.72) than between O levels and A levels (+0.32), presumably because A levels are less broadly based than IB.

A proposal to monitor the implementation of the IB in 50 volunteer schools and colleges throughout Britain did not find funding but an independent evaluation of the effectiveness of the IB in this country would now seem worth reviving.

We have seen the IB in action at Atlantic College, the United World College in South Wales which is coming up to its 25th anniversary, and were favourably impressed. For its rather special intake, the college offers high quality academic study combined with activities to encourage a sense of adventure and social responsibility.

It perhaps puts greater emphasis on community service than is the case in the usual IB programme. Two afternoons a week are given over to social service in the local community such as care of the sick, elderly, or handicapped, and the rehabilitation of young offenders. The college also runs a lifeboat, and beach and cliff rescue services. Other activities include estate work on the college farm and college maintenance tasks.

This is in addition to a wide programme of cultural and artistic activities.

and covers a wide range of skills and activities. It has been suggested that it is equivalent to four-and-a-half A levels, three from "highers" and one-and-a-half from "subsidiaries". The diploma, it has been suggested, may be all right for the very able like those at Atlantic College, but what about the ordinary sixth-form where even now about two-fifths of students are not up to A level?

This is an important point, but the IBO argues that the diploma works just as well at ILEA's Hammersmith and West London College. The IB can be adapted to act as a profile of achievement. Perhaps only the bright pupils will get the whole diploma but others passing particular "highers" and "subsidiaries" would still be given certificates to recognize what they had done, including their contribution to the activities programme. At present, it is possible for a pupil to spend two years in the sixth form, fail A levels, and have nothing at all to show it.

A second line of criticism is that the breadth required for the diploma would unfairly penalize those able students who preferred to specialize. Would there, for example, be any real advantage in making a student follow courses in mathematics and science when his real talent might lie in the humanities? This is the kind of argument that led to the abandonment of the Old School Certificate in favour of O and A levels.

But it is increasingly being realized that familiarity with a variety of forms of knowledge and different kinds of truth is important for living in the modern-day world. The two-tier structure of "highers" and "subsidiaries" of the IB allows students to express their preferences, but provides a balance that is lacking in the free-for-all of A and AS levels. As the headteacher of one comprehensive school commented after seeing the IB for himself, "it is such a fabulous experience for the intelligent and enterprising youngster that I would welcome something like that . . . AS level is such a drop in the ocean as to be less than worthwhile in my view".

Examination boards, the Secondary Examinations Council and the Standing Conference on University Entrance are already looking at the possibility of modifying A levels to meet the changes associated with the GCSE. Discontent with the narrowness of the curriculum which is offered to students in the sixth form and the poor predictiveness of A level is growing.

The International Baccalaureate which brings breadth into the curriculum, makes allowances for different levels of study and takes into account character as well as academic ability is an interesting alternative. The Dutch have already learned from it in their major examination reform and several countries, including Spain and Sweden, have introduced it experimentally into state schools. The IB was designed for special purposes and in itself is not a potential straight replacement for the present system. But it could well provide a model for the successor to A levels which surely must come.

Professor Alan Smithers and Dr Pamela Robinson are in the department of education at the University of Manchester. SAS 33 J. 10. 1987

## UNIVERSITY OF NEWCASTLE UPON TYNE

OPEN DAY  
for Heads of Sixth Form  
and Careers Teachers

FRIDAY, 10 JULY 1987

## REDBRICK REVISITED

As a follow-up to the recent series on Channel 4, the University of Newcastle upon Tyne is holding an Open Day on 10 July. It will be of particular interest to Sixth Form Careers Advisers and Careers Officers.

Accommodation is available at special rates for visitors from a distance. For details, please contact:  
Dr John B. O'Donovan, Assistant Registrar, 6 Kensington Terrace, University of Newcastle upon Tyne, Newcastle upon Tyne NE1 7RU. (081) 232 8511.

## SCHOOL TEACHERS' PROVIDENT SOCIETY

THE SIXTY-SECOND ANNUAL GENERAL MEETING of the SCHOOL TEACHERS' PROVIDENT SOCIETY will be held in the Pavilion Theatre, Bournemouth on Wednesday, 22nd April 1987, at 5.30 p.m.  
A. J. MOSE  
Hon. Managing Secretary  
Canterbury 8, Elmwood Road,  
Liverpool, L16 8AZ.



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## BOOKS IN CLASS

# CHILDREN'S LITERATURE

**Shots. By Nigel Gray.**  
Lutterworth Press £6.95. 0 7188 2636  
**Double Vision. By Gill Wright.**  
Hamish Hamilton £6.95. 0 241 11996

He had had, admittedly, a smooth early ride. Born into a family long steeped in academic and public service tradition (his father, Sir Montagu Butler, was Governor of the Indian Central Provinces) he passed quickly

Mr Howard tells us little of Rab's domestic life, largely I imagine because marital happiness tends to leave very little to tell. This contentment was cruelly curtailed by Sydney's death from a particularly vicious kind of cancer at a sadly premature 52. However, a second marriage to his first wife's sister-in-law Mollie was also full of felicity.

Aspiring candidates in these desperately competitive days will envy the ease with which Butler slid into the

as severe on Butler's few failures to live up to his usually exemplary standards of wisdom and humanity as he is on his subject's chronic inability to advance his own interests at the expense of others.

The Butler who emerges from this book is certainly a good man and possibly a great one. He put his party enormously in his debt—and his party never properly repaid him. But that is politics.

**Martin Fagg**

The school was founded because of concern about the growing threat of German, French and American commerce and industry. Mr Wick's history shows that the study of science and mathematics has predominated in the arts subjects.

Perhaps his most important chapter is "The Institutionalization of Medicinicity" (a phrase he's used elsewhere). Nearly all of us have little choice then to administer to our loved ones BASIC programs for the BPC, Micro, because that is the only software and hardware we can get. Every year, it is becoming harder to break out of the mould of medicinicity that automatically follows. MEP's efforts are not welcomed here as helping forward; its successor, MESU, is mentioned: I wonder how Self will rise in a few years' time?

Management is a complex beast, says Roy Anderson in his book. Thus the syllabus (human, information technology, and computer based) that have been set up to assist management must be complex too. Even so, there ought not to be beyond the grasp of the day-to-day user.

Anderson's book is aimed at undergraduate students and provides a thorough factual basis to further study. The wide range of contexts is a strength in many ways, but it is a weakness too. Catering for economics students as well as for those following computer studies courses (for instance), he is to some extent talking down to some of his readers and drumming others. At the same time, this is certainly a book for RE and HE teachers to consider.

try to appeal to a broad base of students. However, it falls between stools less often than the Anderson text, and will be found more useful by secondary teachers of business and computer studies.

While a good number of modern further and higher education courses have to take some account of what the jargon calls the man-machine interface, it is surprising that very few books deal with it in depth. It is, however, of prime interest to Ian Winfield in his *Human Resources and Computing*. His splendidly thorough yet readable coverage will benefit teachers and trainers working with new information technology in any context, as well as office users and the interested layman. It does not, however, deal with health and safety

excellent book.

Sarah Godowski — the only female writer in this select group — does not touch on health either, her *Micros Housh and Catering* (to reduce the mouth-filling title) relates to a widely used video film on the subject and aimed at the practitioners as well as students. Those students are, again, further and higher education, but this is an excellent background reading book for secondary teachers — business studies and computing (while looking for good case-study material as well as in tourism, leisure, and catering). The book is fairly short, at just over 100 pages, but lively. A while that makes it easy to read, leaves one with a sense of having digested meagrely on *naïve cuisine*.

The overt, random violence scribed in *Shots* contrasts with understated but clearly directed anger that Sam feels for himself and predicament. Learning to like respect oneself is a painful process, painful by far than coming

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## Eric Deeson reviews some recent IT and word processing texts

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Sarah Godowsky – the only female writer in this select group – doesn't touch these areas either, her *Micros Hotels and Catering* (to reduce the mouth-filling title) relates to a wider use of video film on the subject and aims at the practitioners as well as students. Those students are, again, further and higher education, but it is an excellent background reading book for secondary teachers in business studies and computing (who are looking for good case-study material) as well as in tourism, hospitality and catering. The book is a little over 100 pages, but it is packed, with just over 400 checked pages. A white back makes it easy to read, and leaves one with a sense of having dined merely on *nouvelle cuisine*.

fast enough to provide" in padding through the emotion and the result is tightly written and unrelentingly bleak. The violence in Gill Wright's *Debbie Watson* is of very different kind, but it is the destructiveness of grief and personal misery, turned in on itself, that has such overwhelming force. Sara's numbing self-hatred is disabling that it holds him a prisoner in his own home, it causes guilt at being the unwitting instrument of his father's death.

The overt, random violence scribed in *Shots* contrasts with the understated but clearly directed violence that Sam feels for himself and his predicament. Learning to like and respect oneself is a painful process, but it is a painful process that can only be won by pain, not by

At the centre of the intellectual debate is the question of the proper role of government. What things should government do and what should be left to the market? For some, this question can be answered on *a priori* grounds because the market

Headline wants to see a partnership between the various sectors of British society and in particular between private enterprise and the state. Contrary to current Government policy, he wants a national strategy for industry which will enable "the workers, the managers and the owners of wealth to have a share in the national recovery with shared objectives and the widest possible understanding and respect by each partner for the others' role". Thus, although Headline is a vocal critic of some of the Government's radical initiatives to privatize

**Gilliam Pee**

played for England.  
1. 1947-1948 2. 1949-1950 3. 1951-1952 4. 1953-1954 5. 1955-1956 6. 1957-1958 7. 1959-1960 8. 1961-1962 9. 1963-1964 10. 1965-1966 11. 1967-1968 12. 1969-1970 13. 1971-1972 14. 1973-1974 15. 1975-1976 16. 1977-1978 17. 1979-1980 18. 1981-1982 19. 1983-1984 20. 1985-1986 21. 1987-1988 22. 1989-1990 23. 1991-1992 24. 1993-1994 25. 1995-1996 26. 1997-1998 27. 1999-2000 28. 2001-2002 29. 2003-2004 30. 2005-2006 31. 2007-2008 32. 2009-2010 33. 2011-2012 34. 2013-2014 35. 2015-2016 36. 2017-2018 37. 2019-2020 38. 2021-2022 39. 2023-2024 40. 2025-2026 41. 2027-2028 42. 2029-2030 43. 2031-2032 44. 2033-2034 45. 2035-2036 46. 2037-2038 47. 2039-2040 48. 2041-2042 49. 2043-2044 50. 2045-2046 51. 2047-2048 52. 2049-2050 53. 2051-2052 54. 2053-2054 55. 2055-2056 56. 2057-2058 57. 2059-2060 58. 2061-2062 59. 2063-2064 60. 2065-2066 61. 2067-2068 62. 2069-2070 63. 2071-2072 64. 2073-2074 65. 2075-2076 66. 2077-2078 67. 2079-2080 68. 2081-2082 69. 2083-2084 70. 2085-2086 71. 2087-2088 72. 2089-2090 73. 2091-2092 74. 2093-2094 75. 2095-2096 76. 2097-2098 77. 2099-2100 78. 2101-2102 79. 2103-2104 80. 2105-2106 81. 2107-2108 82. 2109-2110 83. 2111-2112 84. 2113-2114 85. 2115-2116 86. 2117-2118 87. 2119-2120 88. 2121-2122 89. 2123-2124 90. 2125-2126 91. 2127-2128 92. 2129-2130 93. 2131-2132 94. 2133-2134 95. 2135-2136 96. 2137-2138 97. 2139-2140 98. 2141-2142 99. 2143-2144 100. 2145-2146 101. 2147-2148 102. 2149-2150 103. 2151-2152 104. 2153-2154 105. 2155-2156 106. 2157-2158 107. 2159-2160 108. 2161-2162 109. 2163-2164 110. 2165-2166 111. 2167-2168 112. 2169-2170 113. 2171-2172 114. 2173-2174 115. 2175-2176 116. 2177-2178 117. 2179-2180 118. 2181-2182 119. 2183-2184 120. 2185-2186 121. 2187-2188 122. 2189-2190 123. 2191-2192 124. 2193-2194 125. 2195-2196 126. 2197-2198 127. 2199-2200 128. 2201-2202 129. 2203-2204 130. 2205-2206 131. 2207-2208 132. 2209-2210 133. 2211-2212 134. 2213-2214 135. 2215-2216 136. 2217-2218 137. 2219-2220 138. 2221-2222 139. 2223-2224 140. 2225-2226 141. 2227-2228 142. 2229-2230 143. 2231-2232 144. 2233-2234 145. 2235-2236 146. 2237-2238 147. 2239-2240 148. 2241-2242 149. 2243-2244 150. 2245-2246 151. 2247-2248 152. 2249-2250 153. 2251-2252 154. 2253-2254 155. 2255-2256 156. 2257-2258 157. 2259-2260 158. 2261-2262 159. 2263-2264 160. 2265-2266 161. 2267-2268 162. 2269-2270 163. 2271-2272 164. 2273-2274 165. 2275-2276 166. 2277-2278 167. 2279-2280 168. 2281-2282 169. 2283-2284 170. 2285-2286 171. 2287-2288 172. 2289-2290 173. 2291-2292 174. 2293-2294 175. 2295-2296 176. 2297-2298 177. 2299-2300 178. 2301-2302 179. 2303-2304 180. 2305-2306 181. 2307-2308 182. 2309-2310 183. 2311-2312 184. 2313-2314 185. 2315-2316 186. 2317-2318 187. 2319-2320 188. 2321-2322 189. 2323-2324 190. 2325-2326 191. 2327-2328 192. 2329-2330 193. 2331-2332 194. 2333-2334 195. 2335-2336 196. 2337-2338 197. 2339-2340 198. 2341-2342 199. 2343-2344 200. 2345-2346 201. 2347-2348 202. 2349-2350 203. 2351-2352 204. 2353-2354 205. 2355-2356 206. 2357-2358 207. 2359-2360 208. 2361-2362 209. 2363-2364 210. 2365-2366 211. 2367-2368 212. 2369-2370 213. 2371-2372 214. 2373-2374 215. 2375-2376 216. 2377-2378 217. 2379-2380 218. 2381-2382 219. 2383-2384 220. 2385-2386 221. 2387-2388 222. 2389-2390 223. 2391-2392 224. 2393-2394 225. 2395-2396 226. 2397-2398 227. 2399-2400 228. 2401-2402 229. 2403-2404 230. 2405-2406 231. 2407-2408 232. 2409-2410 233. 2411-2412 234. 2413-2414 235. 2415-2416 236. 2417-2418 237. 2419-2420 238. 2421-2422 239. 2423-2424 240. 2425-2426 241. 2427-2428 242. 2429-2430 243. 2431-2432 244. 2433-2434 245. 2435-2436 246. 2437-2438 247. 2439-2440 248. 2441-2442 249. 2443-2444 250. 2445-2446 251. 2447-2448 252. 2449-2450 253. 2451-2452 254. 2453-2454 255. 2455-2456 256. 2457-2458 257. 2459-2460 258. 2461-2462 259. 2463-2464 260. 2465-2466 261. 2467-2468 262. 2469-2470 263. 2471-2472 264. 2473-2474 265. 2475-2476 266. 2477-2478 267. 2479-2480 268. 2481-2482 269. 2483-2484 270. 2485-2486 271. 2487-2488 272. 2489-2490 273. 2491-2492 274. 2493-2494 275. 2495-2496 276. 2497-2498 277. 2499-2500 278. 2501-2502 279. 2503-2504 280. 2505-2

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## Schools Prom

Schools Prom North  
Free Trade Hall, Manchester, March  
17, 18 at 7pm.

No sooner has Cardiff recovered from the shock of Schools Prom Wales than it is Manchester's turn to play host to 600 young musicians in six hours of music that gives the lie to the notion that all the north of England has to offer is brass bands.

There are some less familiar faces among Schools Prom regulars Orchestra Steel, the early music group Flat Pavan and Wigan Youth Jazz. The Cantabile Singers, a group of 10 to 13-year-olds from Nottingham, present an imaginative programme that includes "The Car" by Rimsky-Korsakov and Sondheim's "Send in the Clowns". Holly Cross School, Lannark, who put folk music back on the map at last year's National Festival of Music for Youth, bring their distinctive sound to the Free Trade Hall with a folk medley that includes a jig composed by its youngest member.

Local bands feature Bolton Youth Concert Band, who launch the second evening with a specially commissioned work by local composer Darrell Barry, and the Warden Band from Rochdale who mix traditional brass band fare with the Vaughan Williams arrangement of "The Old Hundredth". From across the Pennines comes Sheffield Youth Brass Band with music by Barry Manilow and Rodgers and Hammerstein, and Scaly School with one of their inimitable extravaganzas, "Ambition".

Since the 1970s Manchester has had a policy geared to raising instrumental standards in schools. No fewer than four groups from the city are represented: the Wind Orchestra swings in with "433 Squadron", Orchestra Steel take liberties with Beethoven's Fifth and there is cool jazz funk from Chetham's Music School's Four Wheel Drive. The Youth Orchestra, which draws its members from the six city orchestras, rounds off Wednesday night with a contemporary work, "Estancia", by Argentinian composer Alberto Ginastera.

Last year's Schools Prom North, due to a technical hitch, played to disappointing audiences. But there are high hopes of a massive, flag-waving turnout at the Free Trade Hall next week.

Philip Davidson

Schools Prom North is sponsored by the Association of Music Industries, Commercial Union Assurance, Marks and Spencer and The Times Educational Supplement.

A guy called Vangelis recently successfully defended his honour in the High Court. Appearing (as they say in the tabloids) under his real name of Evangelos Papathanassiou he had to answer the charge that the music he "composed" for the movie *Chariots of Fire* was actually lifted from a work called "City of Violets" by fellow Greek composer Stavros Logarides. Me neither.

There's an old music industry maxim about hits and writs. Lawyers' papers follow chart successes as inevitably as hangovers follow bottles of celebratory champagne. (At the same time, there's a lively battle going on over who "owns" the name Pink Floyd; the old "everybody-love-everybody-else" days are long gone.) Over the years there have been some notorious cases.

While Paul McCartney was fending off a suspiciously delayed paternity suit from an unnamed rum in Hamburg, a judge was deciding that George Harrison's hit "My Sweet Lord" bore a more than accidental resemblance to an earlier Chiffons song called "He's So Fine". George found himself in the odd position of having to pay back all his royalties. The experience left him understandably leery about song-writing and John Lennon's murder only confirmed the view that pop success left you frighteningly exposed.

Plagiarism is a funny business. With someone like Ezra Pound - 60 per cent of whose poetry is direct quotation from other people - it's called "eclectic allusion"; a poetic version of the

The AIDS campaign is an unprecedented experiment in the use of television for public information. It has extended the boundaries of what can be shown and spoken about, and it has set out deliberately to use the medium for propaganda, to change audience behaviour. AIDS: Getting the Message Across (BBC1, March 4) showed some fascinating extracts from the campaigns that have been run in Uganda and in the Scandinavian countries, contrasting them with the Government effort here. Diverse Reports (C4, March 4) considered the Government commercials and showed what happened when *Marketing* magazine offered three advertising agencies the opportunity to demonstrate how the problem could have been tackled differently.

It was ironic that the results could be shown in the space between the commercials, but would never have met the IBA guidelines which would allow them to fill the space between programmes. The advertisers were critical, naturally, of tombstones and icebergs, not specific enough, not properly targeted, too negative. "It was more a question of being seen to be doing something," admitted the man from TSWA, the agency responsible for the commercials, also mentioning the need to consider "the Whitehouse factor". His rivals proposed the caring condom on the side of a bus, a cartoon Willie getting dressed for battle and a film that, while illustrating the expansive properties of the protector, might have led you to believe it was designed to cope with a dripping tap. "There's a whole range of things we're doing with condoms," Norman Fowler assured Question Time (BBC1, March 3) on behalf of the Ministry of Health.

The television companies have been

## ARTS

### Television

# Public enemy

inclined to congratulate themselves on their massive effort, with some justification. The message about AIDS is simple but depressing. It is not the sort of message that the media like to convey. In QED (BBC1, March 4) Graeme Garden and Gillian Rice used multicoloured models to explain the facts and AIDS Help (ITV, March 2 to 6) did the job effectively in five 10-minute programmes, each starting with a brief sketch and each directed at a particular audience or aspect of the problem: what is AIDS, what can young people do to protect themselves, how are women and men particularly affected, and what are the implications of taking the test? Earlier in the evening, Help (ITV, March 2 to 5) asked about education, ethnic minorities and community care for sufferers.

Open Air (BBC1, March 2 to 5) used the phone-in formula to cover similar ground with the help of experts and a sufferer, who had to listen to one caller telling him he had no one to blame but himself. "I expect she's a Christian," he remarked bitterly, in a rare departure from the non-controversial, non-denominational tone of the series. Despite the many expressions of sympathy that he also received from callers and the offers of help from schemes like that organized by the Terrence

Higgins Trust which provides "buddies" for sufferers living at home, the *Open Air* phones took other calls which suggested that public ignorance and prejudice will be one social consequence of the disease. There are probably few people who would go along with the women who proposed that homosexuals should be castrated, but fear of disease is a powerful influence on social attitudes and all of us may find ourselves living in a very different world by the end of the century. Or sooner: Heart of the Matter (BBC1, March 8) had a disturbing report on what appears to be a change in police attitudes towards the gay community and suggested that AIDS has "allowed people to drop the mask of tolerance" towards the sexual behaviour of others.

In some ways, all television purveys of the condition of advertising, even if the product it is selling is itself, it too, is perturbed by the negative messages and prophecies of doom that advertisers try to avoid (like the plague?). Horizon (BBC2, March 2 and 6), summarizing what doctors know about AIDS, pointed out again the difficulty of getting the message across to the most vulnerable sections of the population; but the overall effect of the programme was to reassure, despite its inability to give any positive answer to the question: "can AIDS be stopped?" Experts on television are there to tell us what they know, not to expose their ignorance. But, for those who can be reached by this medium, the four channels have done a conscientious job, supported by telephone numbers and printed matter, like the very clear booklet and factsheets produced by Thames Television for *AIDS Help*. And this is only the start.

Robin Buss



Russian Style: Court and Country Dress from The Hermitage 1700-1920 (Barbican Gallery until April 26) is a unique exhibition. Very few of the 300 items are ever shown in the Soviet Union and even fewer have been seen in the West before. Ranging from the time when Peter the Great began the taste for Western dress and manners to the Russian Revolution, there are lavish dresses of real silver and gold,

more practical daytime outfits and a rich selection of jewellery, shoes, hats, gloves, parasols and fans. There are designs by Worth, Poiret and many by native couturiers unknown to us. Supplementing these aristocratic and high-bourgeois clothes are the brilliantly-coloured costumes worn by peasant women on festive occasions and a selection of Russian textiles from Courtauld's.

## Pop

# Same old song

### Jim Weir on hits and writs

adage that talent borrows, genius steals. The trendy "systems music" composer Michael Nyman (you'll have seen and heard his "balloons" commercial for Milton Keynes on TV) constructs whole works out of cells of melody lifted straight from Purcell, Mozart and Schumann; they're all safely dead, admittedly, and out of copyright but, even so, no one thinks of accusing Nyman of grave-robbing or questioning his rights of authorship. (The hits and writs equation has a missing term; the one no one even likes to talk about. There's no outcry at Nyman's method simply because there isn't that much money at stake. A plagiarism charge is a wonderful way of getting your old forgotten record or novel off the deletion or remainder list. When Ian McEwan's novella *The Cement Garden* was published, an outraged (so his lawyer said) Julian Glavin insisted that the preposterously banal plot had been lifted from his *Our Mother's House*, a novel only remembered for having been turned into a Dirk Bogarde film. It all served its purpose; a new paperback edition of the book, by the way, including the author's admission that he had probably forgotten

million years to type out Shakespeare; it often only takes a half hour in the garage to come up with the complete works of Gene Vincent or Elton John.

One obvious question no one ever seems to ask: why would anyone - anyone as conspicuous and conspicuously talented as George Harrison or chief Door Jim Morrison - need or want to pinch someone else's song? The great critic James Agate had it right when he said that you would be forced to assume that a modern author who wrote a book in which a fat old man who loved skating got involved in a breach of promise case hadn't read *Pickwick Papers*. The funny thing is that as the law stands any of us can write and publish a book called *Pickwick Papers* (or *First Among Equals* for that matter) but we're Dickens still around, he'd be perfectly entitled to phone his lawyers at the first whisper of another overweight, skating promise-breaker. Dickens, of course, knew how tangled the law could be and knew it well enough to have it pronounced an ass and an idiot.

Somewhere in darkest Soho there must be a whole covey of private eyes wearing Walkman headphones over their temples desperately hoping to find a familiar chord sequence they remember from the old forgotten records stacked in the corner. A year or so back, one of them had a terrific brainstorm: Wasn't Wham!'s "Last Christmas" incredibly like Barry Manilow's "Can't Smile Without You"? Wonder if by chance they are related?

## Radio

# 2-timers

As I have admitted before, my own musical friends tend to dismiss my record collection as "music to vacuum to". I should therefore be a modest Radio 2 listener yet, for more than the day, it seems quite unbearable.

Twenty years ago, when I was out of the old Light Programme, as first controller, Robin Scott, promised that it would "provide a wider range of music, including the great and the good, store-house of light music". Over the years it became increasingly difficult to find it. Certainly the same range was cropping up on both Radio 1 and Radio 2's Head of the Line. Recently Radio 2's Head of the Line, Frances Line, was given the job of overhauling its music policy to make more middle-of-the-road and some light classical music. This has been done - some would say quite successfully in that it has led to the departure of David Hamilton. According to a quote in the trade press, he left because "the last year on Radio 2 had been nothing to do with what was happening in music now". His move from a national network to the comparatively tiny Radio 210 in Reading was cushioned by the fact that he is apparently being paid even more money now than he was by BBC and is also receiving 10 per cent of the money paid by a record company to sponsor his show.

Hamilton is now on his own in the studio and no longer assisted by a secretary, technical operator and producer. Still, back at the Beeb, he did at least play his own records. That, as we can tell, still defies David Jameson who apparently has to perform the incredibly difficult task of putting the needle on the disc. First so, it is just possible to understand why a network should employ a "two-jack": he is depressingly popular. What is incomprehensible is how a respectable station can tolerate so blatant and parasitic recycling of the old record press.

For me, the other nadir of the Radio 2 day is the Gloria Humeau show which fills the afternoon with bombastic self-indulgent chat as "personality" promotes themselves. The thought goes into this (for want of a better word) production can be measured by a recent edition. Reporter Kate Ash was answering questions about an interview with the Libyan bomb-maker and an earlier meeting with Qaddafi when he was interrupted by the song "As He Needs Me". (Does he need me, also complete running order.)

It is not just that I find it tedious to listen to these two particular programmes. What is unacceptable is the quantity of purposeless clutter on what was (perhaps still is) meant to be a music network. The resulting wastage is that of an inefficient local radio station desperately trying to fill its spaces caused by restricted broadcasting (the amount of time a station is allowed to play commercial advertisements). Though many dread the prospect of national commercial radio (which they could kill off even the national stations), it would be nice to think that at least one melodic channel - with broadcasters more concerned to present music than themselves, like Radio 2 on Sunday.

Meanwhile the Radio Academy is organising a one-day conference on "music radio" - a relationship between the two, and a real "pluggers" and producers and also that little matter of obscenity. More anon.

## Among this week's contributors:

Edward Elstner's latest musical rapacious volume, *The Outside*, is published by Hamilton. Eric Dawson teaches at Josephine Berlain College, Birmingham. Roger Little is director of the Policy Centre. Gillian Peale is Fellow and Lecturer in Politics at Lady Margaret Hall, Oxford. Jonathan Croall is editor of *Express*.

## Scandinavian connection

Peer Gynt. By Henrik Ibsen. Translated by Michael Meyer. Theatre Royal, Bury St Edmunds. Chas. A musical by Benny Anderson, Tim Rice, Bjorn Ulvass. Prince Edward Theatre.

People who emphasize *Peer Gynt* as a long poem, by way of doing it in performance, forget that he himself was responsible for its theatrical shape - arranging it for production in 1876, inviting Grieg's co-operation in composing music for it which (in the event) neither of them liked. Director Claire Davidson mistakenly uses snippets of this score played on solo violin to accompany the action in this production by the Cambridge Theatre Company. It does not work. Nor, for the most part, does the Norwegian designer Sturla Ronstad's set - wheeled wooden panels concealed with mirrors, too narrow to catch the cast hiding behind them, reflecting the glare of the stage lights into the audience and revealing fidgeting in the wings during Peer's Act 5 agonies - which, nevertheless, suggested an attempt to rethink the play's image that can only be applauded.

Muted applause for the male supporting cast who waste their best time speaking the lines without trying to act them. As the Troll King, the international consortium in Morocco and the Button Mender they fell short of the play's demands - seriously so in the latter role which lacked the forceful menace against which Peer (and the audience) must strive. The female cast, however, was excellent. I have come to think of Tricia Kelly as a missionary actress, she appears in so many worthy productions. Here she plays seven parts with characteristic energy and commitment acting as the wronged bride, the Troll Princess and as Uply Old Woman. Of Katherine New's five roles, Solveig is most

memorable and touching. Maria Charles's Milkmaid, Troll, Belly Dancer and Lunatic are all spot-on, but she excels as Aase being earthy, warmly humorous and moving. Her death scene was magical.

In this she and Michael Maloney worked in the best acting tradition. For Acts 1-3 Peer was a bold bouncing peasant-boy whose powerful dreams defied contradiction. Here he perfectly caught the dreamer's quality of living inside his head and made the women in the audience chuckle at the enormity of his lies. We all laughed at his evangelical opportunism at prayer in Morocco, noting his growing authority expressed in "a voice to command" in the purgatorial experiences of Act 5. It is a delightfully imaginative reading of the part - best in youth but formidable in age - which may be essentially Norwegian but reflects Everyman.

ABBA are responsible for the music in *Chess* and so provide a Scandinavian connection. International chess tournaments in Merano and Bangkok become engagements in the Cold War between Russia and America: stolid, defeating Anatoly challenging "spoil brat" Freddy. A Prologue, setting out the game's origins, magically recreates Indian chess pieces. From this we travel the world, with glimpses of folk-dancing Italy and fieshop Thailand, before arriving at a quasi-operatic finale by which time *Chess* has become a Morality on a world scale: "Star Wars" crossed with "The White Horse Inn". A technological marvel, it has its moments, and a cast that sings, dances and acts relentlessly. Siobhan McCarthy sings marvellously as the women shared by the champions. I lost interest before the end and came out thinking it over-milked and over-priced.

John James

## Nirvana

Welcome Home Jackie  
Birmingham Youth Theatre, Brum  
Studio, Birmingham Rep.

The daunting task of building a truly multicultural, multicultural society is highlighted in this revival of Mustapha Kuru's one-act play of the late Seventies.

It also calls forth some excellent performances from the young cast under Derek Nicholls' direction. David Carr as Marcus and Dana Guy as Zippy take the acting honours as two of a group of disaffected, nihilistic black boys hanging around in a youth club, dreaming of some kind of Rastafarian Nirvana and kicking out verbally at a society in which they feel rootless and alienated.

Different approaches to the problem emerge through the other characters: Sandy the white youth leader, a comfortable, universal uncle to the lads, trying to keep them out of trouble; Gail, her new assistant, a black ex-grammar school girl who has made the cultural leap and hopes to "convert" these boys by trips to museums and safari parks, "to see African things"; and Jacko, who, after five years in prison on a rape conviction, returns hardened and silent, a knife smeared about him; ready and waiting for the open warfare of the streets.

## Rome, Raj

Julius Caesar  
Birmingham Rep.

A wayward mixture of styles robs Derek Nicholls' production of any coherent theme. There is an almost subliminal attention to small, naturalistic detail in the acting and style of presentation - with small squads of marching extras loyalty trying to represent great armies. These attempts at realism are counteracted by a few touches of design, like MacNeil's use of Charles Cusack Smith, (cos-

## SOUNDINGS

## Appassionato

Act One

It is a Friday evening in Covent Garden, in early March. Outside the Royal Opera House, the snow is settling softly on the pavements. Inside the delegates for the symposium "Opera, Ballet and Schools: Working Together" assemble. Among their number are singers, dancers, teachers, advisers, education officers, arts funders, even journalists.

The symposium begins. Marland, a headteacher, bemoans the fear of opera on the part of his profession ("It remains stubbornly alien to most"). He is joined by Hargreaves, a chief inspector, who recalls his conversion to opera ("I had a traumatic experience"), and sings of the millions who are waiting for the chance to experience it ("It is not elitist by design"). Brandt, a rich education officer, then steps forward, and sings of his concern for accessibility and relevance, for bringing the arts within people's grasp rather than compelling them to reach up for them ("We must change the image"). He is followed by Hayes, a patron of the arts from a motor car company, who offers the thought that it is not children but adults that are intimidated by opera ("Children are not blotting paper").

As they disperse into the night, the chorus of delegates express their quiet about the morrow ("Where will all this lead to?").

Act Two  
It is Saturday morning. The snow has stopped. Assembling again in the opera house, the delegates listen to yet more stories. Two education officers, Shapcott and Sulkin, sing of life on either side of the river, the latter bewailing the size of his budget ("My tiny grant is frozen"). During the break that follows, some rumblings of

discontent are heard from certain sections of the chorus. The choir, sotto voce of a lack of focus, of preaching to the converted, of a failure to grasp reality ("Their heads are in the clouds").

All of a sudden Ross, an academic, joins the throng. In an impassioned aria ("A million miles from reality"), he tells them that the symposium is an irrelevance. He pleads for children to be allowed to speak with their own voices: the music is in the child, he says, not in the traditional repertoire. Money should not be put into working with opera and ballet companies, he believes, but rather be spent in schools. Mixing insight with sophistry, and occasionally becoming tangled in contradiction, he advocates support for teachers - but then describes them as "anaesthetized", trapped in their "high art" training, too ready to defer to the syllabus rather than to children's lives.

Warning to his theme, he then denounces secondary schools for ignoring aesthetic education; describes the School Curriculum Development Committee's arts in schools project as a "token" one because of a failure to nail its colours to the mast on children's creative development; and, in a coda, castigates the emerging critical studies as "suspect" for imposing the traditions of adult art on children. Roused by his outburst, the chorus of delegates find their voices. A trio of previously silent teachers emerge from a corner to offer brief recitations of their classroom experiences ("We come from the real world"). One of their number, Lewis, a friend of drama, sings of the nightmare of having to encourage the arts in her school ("Four hundred drama pupils a week").

The scene then shifts to a rehearsal room, and we hear a moving quartet from delegates who have been working in the Midlands. Katak, a dancer, sings sweetly of having suddenly to think for herself in working with Birmingham children, after years of obeying teachers and choreographers ("It felt like my first proper job"). Another, Dobson, a singer, tells of his need to go back to basics when talking to the children about his work ("I'm a better singer now than five years ago"). An orchestra is heard tuning up in

the main house. As they leave the room, the delegates vow to meet again on the morrow to plot a course of action ("On with the plenary").

Act Three  
It is Sunday morning. The sun is now shining. Within the opera house, small groups of delegates are found in every corner. They sing variously of evaluation, professional relationships, planning, curriculum, cultural diversity. The thinkers and the doers have found a common cause. We hear of awareness campaigns, a new committee, the possibility of money for some kind of publication ("We salute you, Calouste"). As the time draws near for parting, they promise to meet again in six months ("Another time, another place"), and the entire company sing joyously in reaffirming the value of their work.

Jonathan Croall

## Like minds?

A merger of considerable significance was announced this week: Hodder and Stoughton have bought Edward Arnold, and they will join to form a major power on the educational publishing scene.

The decision had been a well-kept secret, and came as a complete surprise to Edward Arnold's staff. That ominous word "rationalization" is being bandied about redundancies are likely. Hodder's 84m educational sales combined with Edward Arnold's 57.9m turnover will create the sort of operation which thrives in the current economic climate. The latter had grown too big to keep the advantages of a small publisher. The Hodder spokesman described the acquisition as "a very exciting and constructive get-together of two like-minded and independent publishers". Spokesmen generally do say such things, but in this case the words may actually be true. Anthony Hamilton and Bryan Bennett of Edward Arnold join Richard Morris and Brian Stevens of H and S on the new board. The Edward Arnold imprint will remain as such: the products should retain their quality.

Michael Church

albeit one whose beauty, determination and strength of love have been enhanced by the centuries. She portrayed these qualities with a lively charm that was as vibrant in her first enthusiasm for Alabard's learning.

Shirley Toulson

## Break out

The Poor Girl.  
Made in Wales Theatre Company.  
Sherman Theatre, Cardiff.

Michael Bosworth's new play *The Poor Girl* is a brutal picture of the dehumanizing nature of poverty. Set during the 1831 Merthyr riots, it contrasts the opulent, somewhat frivolous lifestyle of the aristocracy with the poor's desperate struggle to survive. The play depicts the 1830s as a time when poor people were regarded as possessions. The Girl seeks to break out of that mould, and, after being offered charity and education by the upper class, she leaves them in search of freedom.

For students of Welsh history, it is a useful introduction to the conditions which gave rise to the Merthyr riots, and it also traces their effect on different strata of society.

Iola Smith

## Nazism

Anne Frank in the World.  
Blandford House, Newcastle upon Tyne, until April 12

It is fitting that some of the most striking images in the exhibition *Anne Frank in the World* should be of children. There are by now familiar pictures of seven and eight-year-olds learning the Nazi salute at school. Then there's a photograph of a children's party held in Austria, to honour Hitler's birthday in 1938: small hands reach out for a piece of the cake.

grotesquely decorated with a huge, used swastika. More poignantly, the family snap taken on June 12, 1939, Anne's 13th birthday, shows nine little girls - Anne and her neighbourhood friends - their arms thrown round each other's shoulders. How many of those children survived the next six years? The exhibition - touring the UK throughout 1987 and 1988 - is made up of 800 photographs. Starkly-written captions trace the rise of Nazism in Germany and the occupation of Holland, and document the Frank family's life during the years spent in the "secret annexe" in Amsterdam. A final section draws a telling comparison - again through photographs - between Fascism then, and racism and anti-semitism today. Schoolchildren from older journals upwards (and teachers) will find a visit worthwhile and moving, especially in the wake of the recent TV series on the Diary.

Heather Welford

## Identities

The Wind of Change.  
Half Moon Young People's Theatre

"I'm English and I've got to make the best of it. I can't unless I know what struggle I come out of," says the son of the Jamaican nurse, whose memories of coming to Britain in the Fifties are the basis of this production. It is as if the whole play has been working up to this line, a lesson to young blacks (and to an extent, to young whites) about racial identity and the importance of history.

The story is told in flashback through the eyes of two women, both nurses, one black, one white. Both have teenage sons. The black son is searching for his roots. The white son doesn't have any particularly close black friends, and sees this as perfectly natural. He looks a bit surprised at the anger with which his mother greets this news. Mum has become, through a brief reminiscence, about her friendship with a black girl some 30 years ago, a born-again anti-racist.

## Decision time

The Poacher's Secret. Roundabout  
TIE, (Tel: 0602 474361)  
Bardall Infants School, Notts.

You can see it on their faces. They are terrified. Being an infant can be pretty stressful, especially when strange people arrive asking for your help. What do you say when you're six years old and teacher's not there to tell you the right answer? *The Poacher's Secret* (originally devised by Pit Prop Theatre), introduces very young children to decision-making. Two sisters, who live on the edge of the lord's estate around 200 years ago, are faced with a lack of work, a lack of food, and a new baby. They turn to poaching hares. The children have to decide whether they should help the woman evade the gamekeeper. The actors ask their advice, listen to what they have to say, and gradually they lose their fear of saying the wrong thing.

Nick Wood



## RESOURCES

## Bigger Macs

Ray Hammond introduces a range of new computers for education

At the year's most important computer show in Hannover last week, three major computer companies introduced microcomputers likely to have a significant impact on the educational market.

Apple marked its tenth anniversary by launching two new ranges of computers and a flurry of peripheral products and software packages. Commodore, now struggling to recover from a disastrous two-year recession, announced two new machines, one aimed at schools, the other at further education. Atari also announced two new machines, one of which is of interest to secondary schools.

Although Apple is still only the third most important supplier of computers to education in Britain, outside the UK the company dominates the international education market at all levels. Its new machines include an expandable version of the best-selling Macintosh Plus and a completely new machine called the Mac II.

At the Apple launch UK managing director David Hancock said: "We regard education as a vital market. By placing Apple products into the hands of students we know we are creating customers for our business machines in the future. We will be making very attractive educational discounts available in Britain."

The Apple Macintosh machines are rapidly gaining ground in education through the ease of use offered by the mouse-based operating systems. Specialist applications such as desk-top publishing (see this week's Computer

Extra) are also proving attractive to secondary schools.

As far as British schools are concerned, the immediate effect of the Apple initiative is unlikely to be a clamour for the more powerful Macintosh machines. Instead, it will probably produce more attractive educational deals on the existing Macintosh 512K and the Macintosh Plus. It is likely that the 512K machine will eventually be discontinued, but it will remain compatible with the majority of Macintosh software. The high street price of the Macintosh Plus with one megabyte of RAM has now dropped to under £2,000 (the 512K Mac to under £1,500) and educational users can expect discounts of up to 30 per cent in some instances considerably more.

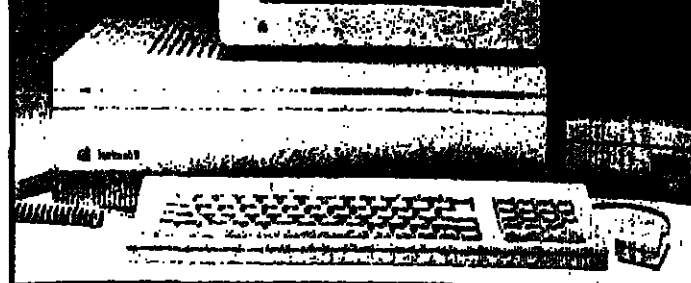
Apple's new machines are dubbed the Macintosh SE (System Expansion) and the Mac II. The SE offers improved performance, two built-in disc drives (either floppy or hard disc) and is the first Macintosh to have true "open architecture". The machine has slots for expansion cards which allow users to enhance the machine and to connect it to the MS DOS software environment. Standard RAM is one megabyte (expandable to four) and the retail price is £2,495 for a dual floppy disc system. The Mac SE is available immediately.

In technical terms the most exciting new product from Apple is the Mac II, a true 32-bit microcomputer based on the Motorola 68020 microprocessor. This computer offers four megabytes of RAM, an astonishing colour capa-

bility and very high processing speed. Apple say it is likely to find markets in further education, science and business and the retail starting price will be £4,500. Volume production begins in July.

Over the last two years Commodore have suffered in all areas of the microcomputer market and despite the fact that the company was first to supply micros to British schools (the Commodore Pet), only a few schools now use them. A year ago the company launched its "recovery" product, the Amiga 1000 which offered a wide range of sound and colours and was coupled with a mouse and easy-to-use operating system. Hopes were high that the company could recover some of its educational market in the UK and emulate its performance in Germany where it has remained one of the leading suppliers to education.

But the Amiga has been dogged by production problems and slow software development. Despite this, critics have praised the machine and at Hannover the company introduced a new low-cost version which will be of interest to British education. Called the Amiga 500, the computer is priced at £499 plus VAT (Commodore UK do not currently offer educational discounts) and offers features which include four-channel hi-fi and stereo sound, a MIDI interface which allows the computer to control electronic musical keyboards, a film-animation facility which allows videos to be created and edited and full mouse-controlled software. It is supplied with



512K of RAM and one 3.5 inch 880K floppy disc drive.

The second Commodore introduction is a more powerful Amiga, the 2000. This machine offers the opportunity of using MS DOS (IBM-style) software, but in particular offers enhancement of the Amiga's well-developed colour and sound capabilities. The up-market Amiga is available with a choice of disc drives, including 3.5 inch and 5.25 inch floppies and 20 or 40 megabyte hard discs. UK retail prices start at £1,095 plus VAT for a machine with one megabyte of RAM and a single 3.5 inch 880K RAM disc drive. Both of the new Amigas are expected to be available next month.

The third major company launching products for education is Atari, formerly best known for its excellent computer games but now known for the ST range of computers. In Britain the company has had difficulties with distribution, but a UK team is now in place and a spokesman says that educational discounts are available "by negotiation".

The most important new Atari product is the Mega ST, an up-market machine which although of limited interest to schools, has had the effect of pushing down the retail price of the excellent Atari 520 ST to £299 plus VAT. The ST machines offer more and Windows graphics, which enable students to use them easily, as in a new enhanced ST offering up to 16 megabytes of RAM, three disc drives and a wide range of ports for connection to other PC environments. The retail price of the Mega ST, which due in July, starts at £700 plus VAT for a one megabyte RAM machine with single 3.5 inch floppy disc drive.

Almost as an afterthought, Atari have also introduced an IBM-PC clone at a price which places it against Amstrad's PC512. The new PC, also due in July, offers 512K RAM and a single 5.25 inch floppy drive for £495 plus VAT.

Computers in Education Extra, p. 41

## Great expectations

Studying to Succeed  
History at A level and Beyond  
Price £1.95  
Longman Group UK Ltd, Longman House, Burnt Mill, Harlow, Essex CM20 2JE.

One piece of advice often given to students "at A level and beyond" is never to let assumptions go unchallenged, and there's one which needs challenging here - that you succeed at A level history in just the same way as you succeed in university history.

It isn't quite true, and in general the author John Mee's advice is more suitable for "beyond" A level. The students who arrive at his door to study for history degrees don't, he says, have any idea how to study effectively, yet clearly if they hadn't succeeded at A level they wouldn't be there. He may well find it annoying that they are not used to academic libraries, or to compiling their own reading lists for essays, but most A level students don't have the time or the opportunity to acquire these skills, so the advice about how to do it could be inappropriate at this level.

So, while there is undoubtedly excellent advice here, Mr Mee's book perhaps sticks to initiating students into full-time university study at a level subject, and leave it to teachers to help their candidates cope with the inevitable constraints of studying three, or sometimes four, AS exams can only become tighter.

Jessica Savage

notes

MOVING OUT  
A new pamphlet published by the International Year of Shelter for the Homeless is designed to inform young people about the pitfalls of leaving home. It includes information on renting, lodgings, bed and breakfast, council housing, housing associations and co-operatives, short-life housing and buying a home. It also looks at the rights and responsibilities of tenants and landlords and lists 12 organizations and publications which will be able to help them. "Moving Out" is available from IYSH, 19-29 Woburn Place, London WC1H 0LY, (01) 837 7151.

SCHOOL STEAMING  
A new book from the Museum of Childhood, 21, Giverny, London, contains information on the history of steam trains and the role of the school in the development of the railway.

two school steaming days during May 13 and October 1. Prior bookings essential. School worksheets giving a range of information on exhibits will be available shortly.

Admission charges on special school days are £1.70 (adults) and 80p (children/students) with a 10 per cent discount for parties of 12 or more. Further details and booking forms on school steaming days and other events are available from New Bridge School Museum, Green Dragon Lane, Broomfield, Middlesex, (01) 568 4787.

INVITATION TO WINDSOR AND HAMPTON COURT  
An informative 30 minute cassette with sound effects and music accompanied by 24 colour slides, produced by Davidson of Magic Carpet Productions, 27 Richmond Hill, Richmond, Surrey TW9 1DG, (01) 894 3885.

## Feeling the pinch

Jean Sargeant reviews a package of BBC programmes on the painful effects of joblessness

CONTINUING EDUCATION  
The World of UB40  
BBC1, March 8  
Advice Shop  
BBC1, March 10-12  
The Smiths  
BBC1, March 15-20, 10.40pm  
Jobless not Worthless  
BBC1, March 25, 11.15pm  
Two Nations  
BBC1, from April 7, 11 pm.

To some UB40 is a band; to the unemployed it is a benefit card. The World of UB40, a drama broadcast last Sunday night on BBC1 was designed as a curtain raiser to a cluster of BBC programmes on unemployment.

However, even if one man's meat is indeed another man's poison, I find it difficult to believe that this "offbeat look" at what it is like to be out of work was viewed with any degree of enthusiasm.

True, some of the facts interwoven with the drama were vividly expressed: in 1965 the unemployed would have filled three Wembley stadiums; last year (not counting people on special measures) 34 would have been needed. Overall though, it was poor stuff. The characters were unsympathetic, the humour cringe-inducing and the style laboured. Even the music, specially written and sung by Ian Dury with Chris Jankel, failed to cheer me up.

It was not possible to preview Advice Shop which went out after The TBS had gone to press, but in principle, consumer programmes of this sort, offering practical advice for those trying to get back into work, are to be welcomed. The tone of the series is somewhat critical of the Manpower

Services Commission's measures, but viewer feedback in the past has indicated that the programmes were often not critical enough. Last week they examined Re-start, the newest back-to-work scheme.

Now, spread over this week, from Sunday to Friday, a series called The Smiths provides the highlight of this UB40 batch of programmes. The Smiths are a real family from Peterlee, a new town in County Durham. Over six programmes we watch them tackling the task of making ends meet: Paul, the younger son, who got a job after YTS and is consequently the main breadwinner, slips his unemployed father a few pounds to tide him over; mine is the gastronomic highlight of the week; Carol struggles to keep cheerful for her husband's sake; the Sunday outing is to gather wood... At the recent press preview which the family attended, John, the elder boy who has never worked, announced that he had just started on a "fantastic" Community Programme place at a youth club. The Smiths are not work-shy scroungers; they want jobs, welcome training, are willing to move. They believe the State has let them down.

If one of the characteristics of an education programme is that it leads people to actually do something, then The Smiths is a good example of the genre. The programme itself has grown out of research commissioned by the BBC from academics at Newcastle University's Centre for Urban Regional Studies. Their report, which sets a context for the programmes, argues that official figures underestimate unemployment by nearly 50 per cent.



A sense of déjà vu? Two contributors to the Great Debate

## What's the matter?

CONTINUING EDUCATION  
Education Matters  
BBC Radio 4VHF, Sundays 4.30pm.

"Our new education programme comes at a time when teaching and learning have never been higher on the agenda of political debate," said Susan Marling, introducing the first in the series, Education Matters.

Of little memory: it is just 10 years since a prime minister, no less, called for and got a Great Debate on education. But in another sense Miss Marling is indeed correct. Jim Callaghan did not face a seemingly never-ending succession of pay disputes and classroom disruption, a new examination system for 16-year-olds, and a rapid privatization of the service by a number of local authorities. Indeed, it's hard to remember just what he was worried about in that far-off peaceful time.

Not that the teachers' pay dispute necessarily does or should impinge on "teaching and learning", as Miss Marling implies. But sadly, in all too many minds it does. Education correspondents and commentators on a number of national newspapers and in the "informal" media have to a large degree ceased to view about curricular practice and innovation, and have become in effect the latest stages of wage bargaining and town hall disputes, real and imagined. All the articles, radio and TV programmes on education still leave too many parents thoroughly in the dark about what goes on in a normal, routine day at their children's school, and will fail to give those parents a

satisfactory indication as to what helps constitute a good school or a good teacher. No mean failing in an industry which churns out more verbiage about itself in a month than most others in a year.

Perhaps Education Matters will be different. It certainly is about time that there was a weekly programme discussing topical education concerns. Why the BBC should have laboured under the illusion for so many years that more listeners are interested in farming than schooling is something of a mystery.

The first programme gave a detailed and informative account of Suffolk's pilot teacher appraisal scheme and managed to get an answer at last to the question of who will assess the chief education officer. "I'm tempted to say God," replied Suffolk's Duncan Graham.

The programme also gave items of current education news with interviews on the pay dispute, to which it returned at greater length last Sunday. It looked at curricular innovation in the form of the Schools Industry Project, and had the ubiquitous Ted Wragg give his views on the whole kaboodle. It is never easy to produce a programme which at the same time will be interesting to the professional and the committed parent. But with this sort of mix, Education Matters looks to be succeeding. It may also be mildly comforting to those viewing with horror the prospect of another term's disruption to hear how smoothly Suffolk's appraisal scheme was progressing. It is not that long since the words "teacher appraisal" also had quite a few connotations.

David Lister

## MEDIA



Willing to work: members of the Smith family

cent. Post-programme activity is being organized by the newly created "E Force" (a joint BBC/Community Service Volunteers project) in association with Replan. Developments include a high street "Opportunities Shop", a "talkback session" for local people, viewing groups, and the organization of information and learning activities for people out of work in Peterlee.

In the week after The Smiths, Jobless not Worthless will examine unemployment in relation to people's health. Clips from EastEnders featuring Arthur Fowler illustrate the theme. Contributions cover the work of the

Inner City Trust in Londonderry and the opinion of experts such as Marie Jahoda. A final series of programmes, Two Nations, will start on April 7 and will study the changing pattern of employment and examine policies successive governments have taken in order to stop the rise of unemployment.

The last word on The World of UB40 belongs to John Smith. "It's got to be about how unemployed people feel - the effect it has on people, the health effect, the depressive and demeaning effects of it, the financial aspect. There is a whole story to tell there, isn't there?" He ought to know.

briefings  
radio & tv

For schools

LET'S MOVE!  
(Monday, 11.20 VHF4)  
A new unit, "Noah's Ark", allows younger infants to create all sorts of creatures from creepy-crawlers to cuddly-furries.

CONSUMER EDUCATION:  
VALUE FOR MONEY  
(Monday, Tuesday, 00.30 VHF4)

A new series aims to protect teenagers from the minefield of the "consumer desert". Presented by Val Bethell of the Consumers' Association, the programmes deal with straight purchasing, money problems, value for money in leisure pursuits and rights over health and housing.

MEDIA STUDIES: RADIO WORKSHOP  
(Wednesday-Friday, 00.30 VHF4)

A short introduction to radio programme making for 14 to 17-year-olds. Deals particularly with drama productions and different ways of covering news items.

SOMETHING TO THINK ABOUT  
(Thursday, 10.15 VHF4)

Infants find out how to get help quickly in this new unit. "Dial 999" follows a WPC on her beat and defines what is a real emergency.

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10.30-20.00  
Wednesday 18 March  
09.30-13.00

NATIONAL SPORTS CENTRE  
SOPHIA GARDENS, CARDIFF  
Thursday 19 March  
10.30-19.00  
Friday 20 March  
09.30-13.00

PEMBROKE HALLS  
WALKDEN, SALFORD  
Wednesday 25 March  
10.00-19.00  
Thursday 26 March  
10.00-17.00

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Work card from the topic pack "Forces" (natural, not armed)

## Picture this

Science Scene Setters: Primary Science  
Topics from British Gas  
Six sets of work cards together with teachers' guides  
25 per cent discount price of £24.75  
until August 1 1987  
British Gas Corporation, PO Box 46,  
Hounslow, Middlesex TW4 6NF.

The advertising pamphlet says that British Gas, "as a high-tech industry, has a vital interest in the science capabilities of the next generation". If that is true then they are doing the right thing by influencing primary science with this well planned and

convincing series of work cards. The cards, written by Eddie Murray and Roy Crittenden of West Midlands College of Higher Education and Brian Nicholl and Jenny Selfe of NS Education Consultants, London, are arranged in six familiar topics: Air, Flight, Forces, Heat, Ourselves and Water. Each topic set has a well written teachers' guide which includes a facts sheet with background information so that teachers can do their homework beforehand. The 10 individual cards for each topic are discussed in the guides with interesting advice for both experienced teachers and beginners.

A useful feature of the cards is that

## Good sense

The Rubella Action Pack  
A multi-curricular approach to rubella health education.  
Price £4.95 + 35p postage.  
Produced by SENSE, 311 Grays Inn Road, London WC1X 8PT.

Safe and effective vaccination against rubella (or German measles) has been available to women and girls in this country since 1970. Although a mild disease in childhood, rubella can be

devastating if contracted in pregnancy. Most girls are tested for immunity and offered the vaccination between the ages of 10 and 14 - the target level for school vaccination is 95 per cent. But many areas are still falling short of it, which means that there are young women leaving school and contemplating pregnancy without knowing whether they are immune or not.

SENSE, the National Deaf-Blind and Rubella Association, has produced an excellent package of teaching materials on rubella, its purpose being to increase the number of girls vaccinated. Designed to be used by teachers and the school nurse in the week or so

preceding the sending out of the vaccination consent forms, it contains material which can be used in a variety of settings across the school curriculum. This could mean tutorial periods, health education, maths, art, drama, biology, or PE.

In an attractive pack with sturdy photocopiable pupil material and information for teachers, this will be an invaluable part of the health education programme in every school, whether primary or secondary, that wishes to take seriously its responsibility to educate about rubella.

Robert Johnson



## END PAGE



'Thinking about the computer's role in education does not mean thinking about computers. It means thinking about education.'

Ellis, The Use and Misuse of Computers in Education, McGraw Hill 1974

## Identifying needs

Peter Heaney argues for an investigation into information technology in the primary school

Information technology in education is potentially a powerful instrument of curriculum change. Considering the role of IT can provide an opportunity to re-examine the curriculum generally. Yet the introduction of the new technology in primary schools has neither affected children's learning greatly nor caused general curriculum development, because it is being used to support the existing framework rather than to promote change.

With the introduction of computers, the primary teacher is faced immediately with the practical problem of assimilating and integrating the technology. Curriculum integration is crucial. If the teacher is not aware of the potential for change, then any innovation will be shackled within the limitation of existing technologies and effect only marginal change in the existing curriculum.

One major problem is the tendency to accept that achieving an operational

competence is the most important requirement of the teacher. When using a wordprocessor, for example, one of the most successful applications of information technology in the primary school, a lot of effort is spent becoming operationally proficient. Teachers are taught how to edit by text insertions, deletions and resequencing. However, the vital questions are often unasked.

With perhaps only one computer to be used in a number of classes, classroom management becomes an area of concern. Uncertainty of purpose leads to a situation where the use of the computer may, from the children's point of view, be termed as functional. The computers are used as electronic page turners or monitors, leading the children through a predetermined sequence of "learning" activities which may have little specific relevance.

Decisions and priorities about the use of the computer cannot be taken at this functional level. In the primary school information technology can

have an important impact on language development, particularly with the use of wordprocessing and the greater freedom with which the children can edit their work; and on information skills, such as the children's ability to research, collate, interpret and apply information within a given context.

The benefits of information technology are most apparent in language development. The most prevalent use is in wordprocessing. However, it is not by achieving operational proficiency but by examining the nature, scope and role of writing in children's language, that any benefit can be achieved.

Since the use of a wordprocessor can easily facilitate the children in drafting and editing their work, the question should be, what do we want the children to achieve by editing? The aim of drafting should not be the production of "Good Work". In terms of presentation criteria. To realize the potential of wordprocessing for children's language, the teacher has to

consider elements of a successful writing environment in the classroom.

Children sometimes have little sense of writing for an audience. If language is accepted as a communication process, how important is the role of audience in their writing? Is the teacher usually perceived as the only audience? And how often can they identify with their work from conception to completion, or communicate their own thoughts or interpret experiences?

If writing is not seen as purposeful, it is almost impossible to convince the child of its value, and if there is little purpose in writing, then there is little purpose in editing or drafting what has been written.

It is through writing and reflecting on what has been written that the child is made aware of his thinking and begins to exert a control over it. So how can the curriculum, supported by the technology, allow him the opportunity to reflect on how well the written work communicates?

Information technology has provided a very powerful tool for handling and managing information, but it must not just remain at the operational level. There are the wider skills of identifying the purpose for which the need the information, refining, identifying suitable areas for investigation, identifying the questions to be asked, collecting the relevant data, and converting the data into valid information within the context of their original purpose. The use of the information technology "tool" needs to be taught within the context of this range of information skills, and within a curriculum context which will provide a purpose for the activity.

Information skills can be defined as the ability to research, collate, manipulate and apply data. However, this is only valid where there is a genuine problem. The range of skills is wide and varied, and the child has to learn not only to manipulate the data to create information, but also to construct possible solutions for their problems. He must be able to define the problem effectively and to search for and create suitable information.

These skills are not generally developed in the primary school, and little consideration is given to justifying the educational validity of a lot of software material which is used in the class.

By itself information technology will be unable to achieve its full potential. There is a need for a specific process of evaluation to facilitate the integration of IT into the curriculum and direct subsequent change based on identified needs. Without it, the impact of information technology in the primary school will at best be peripheral and at worst a re-implementation and entrenchment of existing practices.

Peter Heaney teaches at Steephurst Primary School in Londonderry, Northern Ireland.

## According to the Gospel

Gospel Resource Sheets  
Price £18  
Edward Arnold, 41 Bedford Square,  
London WC1B 3DQ.

This collection of worksheets is based largely upon the Gospels of Matthew, Mark and Luke. There are 30 sheets, all of which may be copied for use within an institution. They are aimed particularly at pupils in the second and third years of secondary school but could, the preface says, "provide a pleasant way of reinforcing some important points at GCSE level".

Teachers' worksheets reflect their own particular style and methodology. Many teachers do not follow a textbook, but use a number of books in order to produce their own notes and "personalized" material. It therefore seems rather depressing that Edward Arnold have seen fit to publish a set of standardized worksheets, particularly with activities like "colour in Mary's light blue robes and white lilies" (worksheet 3). Is it a vain hope that second and third year pupils could be encouraged to do something more purposeful? The educational objectives seem obscure.

Other sheets are equally obscure: "Find out all you can about epilepsy (and ask your teacher what he/she would do if someone had a fit in class)". Why can't the pupil find out something that relates more to the meaning of the story? Worksheets do have their place; virtually all teachers use them, but to use someone else's suggests a lack of insight and initiative. These sheets are dull and lack purpose.

Alan S Brown

Two new sets of slide packs and booklets on different cultural groups at worship focus on The Hindu Temple and Its Symbols (£15.25, £10.50) and The Orthodox Liturgy (£15.24, £9.70). Both packs are available from The Slide Centre Ltd, Alton, Hampshire, Somerset TA19 9HS.

## WHY DO WE MEN PRETEND TO KNOW ALL THE ANSWERS

Six "Boyswork" posters and discussion points by the B Team set out to challenge conceptions of the young teenage male: £5 from BQM B Team, London WC1N 3XX.



## Roots

The Leaving of Liverpool  
Pack of archive material £3.50  
Merseyside Maritime Museum, Pier Head, Liverpool L3 1DN.

As everyone knows, it's not the leaving of Liverpool that grieves, but that one's destiny is bound to stay behind. This voluminous pack put together by the Merseyside Maritime Museum, is part of their efforts to establish an Emigration Bureau to help people trace their emigrant ancestors.

The material dates from the mid-19th century and comprises extracts from newspapers, manuals, trade documents, diaries and personal letters as well as posters of ships, a fascinating contract ticket which specifies in the small print that the provisions paid for and provided may not suffice for the voyage, and a photograph of Eastern European emigrants passing through Liverpool on their

way to the promise of Australia or North America. Life in the colonies was as hard, it might seem, as in the mother country. A series of letters from John Beakbane to his family reveals how this emigrant to Canada was swindled by his employers in a leather company, and enlisted, destitute, in the US army. The life there was hard and he considered deserting and becoming a miner. None the less he forbade his family to send him money. Richard Batterby, a would-be emigrant to Australia, describes in another series of letters the harsh realities of life in the Australian gold-diggings. He was one who returned.

Newspaper advertisements puffing off prospects on farms and ranches, extolling the facilities provided by emigration agents contrast with the sordid realities of life in the insanitary steerage compartments, best illustrated in the diary of John Hedges who

sailed with his family to Australia in 1858. His son died on the voyage and his first task on arrival was the burial. It is touching to read this, but also touching to read a more banal entry: "had our boxes up, found everything all right, except a Pot of Jam was packed wrong end up".

Liverpool itself in those days was no secure haven. A way station for many fleeing from other lands, it was a rough dock town, whose fortunes were built on the "vigorous colonization" urged by many social reformers. Over nine million passed through the city between 1830 and 1930 on their way to a new life. As the excellent introductory booklet makes clear, the choice was often a lottery between the flying pan and the fire, and one can only salute the bravery of those who tried, in appalling conditions, to "strike it lucky on a ship-travelling west".

Victoria Neumark

## Think fit

Epilepsy: The Package for Schools  
Price £4.50  
British Epilepsy Association, Con-  
thorne House, Bighouse, New  
Wokingham Rd, Wokingham, Berks

"One mother behaved very strangely. She stalked into Miss North's class next day to tell the headmistress that she thought 'that a child bit that should be in a class with what we called 'normal' children'."

The child in question, of course, has epilepsy and the attitude of his classmate's mother is not unusual. Although at least one in every 100 children has epilepsy - and that one at least one in most schools - ignorance and myths about it abound.

Helen Young's book, *What Difference Does It Make?* doesn't, like the above quotation comes, a part of a package of materials produced by the British Epilepsy Association. A recent survey by the teachers' attitudes to epilepsy showed that the vast majority felt their knowledge was inadequate and guidelines schools were often lacking.

Materials were developed to meet the strongly-felt need and they are available, having been tested in a wide range of schools with encouraging results. Teachers' notes aim to provide better understanding of the needs and practical management. The materials are copyright-free and can be copied to produce class sets. There are sections on facts, first aid, the signs and symptoms, and discussion suggestions designed to generate positive attitudes to epilepsy. A poster called "If your friend had a fit, would you know what to do?" explains simple first aid steps in the event of epileptic seizures.

Helen Young's book is perhaps the part of the package most likely to have an impact with younger children. It tells the story of Danny, a perfectly ordinary boy who happens to have epilepsy. He loves sport but is teased from swimming. The materials are designed to be flexible and could be used in small classes or in the lower forms of primary schools. Teachers owe it to their pupils to educate about epilepsy, removing the stigma and fear which still surrounds it.

# Battledores, horn-books, copybooks, school reports, reading cards, invoices and receipts, printed school rules, presentation labels, school prospectuses, notes to teacher...

A wealth of such ephemera has been collected and preserved by The Ephemera Society and is currently being exhibited at various sites around the country.

The collection depicts educational times past with a vividness that only such material can evoke, giving sharp insights into the social, political and economic aspects of schooling through the years.

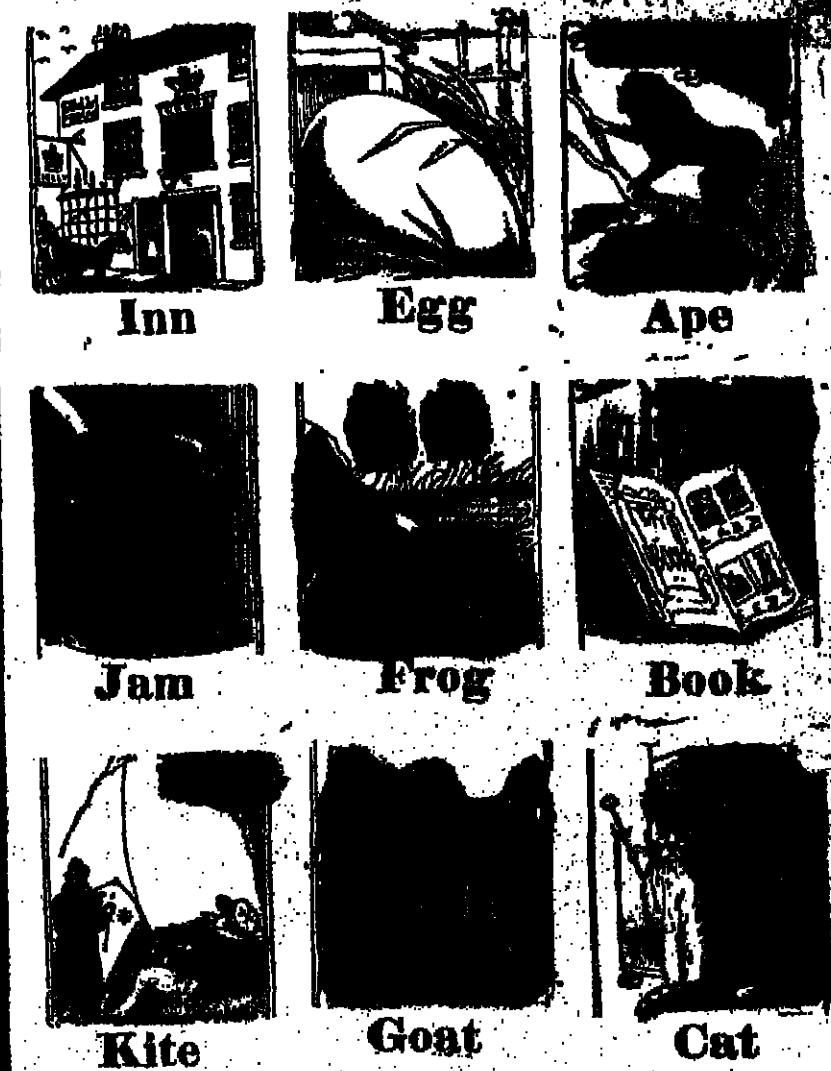
In association with the Society, The TES has published an illustrated booklet based on the exhibition with text by Maurice Rickards, foreword by Stuart Maclure and a teaching note by Graham Hudson.

THE TIMES

## Educational Supplement

For your copy of the booklet, entitled *Happiest Days of Your Life*, send a cheque for £1.95 (including postage and packing) to Ephemera Booklet, The Promotions Dept., The Times Educational Supplement, Priory House, St. John's Lane, London EC1M 4BX.

## Happiest Days of Your Life



## The Ephemera of Education

Please send me \_\_\_\_\_ copy(ies) of *Happiest Days of Your Life* at £1.95 per copy. I enclose my cheque for £ \_\_\_\_\_ made payable to The Times Supplements. Name \_\_\_\_\_ Address \_\_\_\_\_



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Headships	BARNET LONDON BOROUGH REQUIRED SEPTEMBER 1987. DEANSBROOK INFANTS SCHOOL. 252 NURSERY TEACHER, Scale 2. Removal expenses and separation allowances available. Application forms (foolscap a.s.e.) obtainable from and returnable to the Head Teacher by 27th March, 1987. (351785)	ST. MARY'S V.A. LOWER SCHOOL. Dunsdale Road, Caddington, Nr. Luton, Beds. Tel: 608440. Required for April 1987, a Nursery teacher, Scale 2 post available from suitable applicant. Practising Catholic preferred. Application forms available from and returnable to the Headmistress. An Equal Opportunities Employer. (35555)	WYCOMBE AREA. An Equal Opportunity Employer. Required for April or September, a teacher to work with ethnic minority children in Nursery Schools, as a member of the Multi-Cultural Support team. A knowledge of Urdu/Punjabi would be an advantage. Scale 2 for a suitably qualified applicant. This is a peripatetic post and a car owner is essential. Application forms and further details available from the Education Officer, Town House, Castle Street, High Wycombe, Bucks. Closing date 2nd April 1987. 100026 (35555)	GLENDROOK INFANT SCHOOL. Wigorn Road, Ilkborough, Nottingham NG8 4PD. R.N.I. (Nursery) NURSERY (Scale 2). A suitably experienced and enthusiastic teacher is required for September, or earlier if possible, to lead a forward looking 40 place nursery unit. The successful candidate must have an interest in parental involvement. This is a re-advertisement. Application forms are available (a.s.e.) from the Head Teacher at the school. An Equal Opportunity Employer. (35555) 100026	METROPOLITAN BOROUGH OF WIRRAL NURSERY SCHOOL. Twickenham Drive, Merseyside. L65 9PF. REQUIRED FOR 27th APRIL 1987 or as soon as possible thereafter. TEACHER - SCALE 2. A suitably experienced and enthusiastic innovative team member as an integral member of an existing team. Further details and application form from the Head Teacher (a.s.e.) obtainable from and returnable by 27th March 1987. (351785)

## Inner London Education Authority

# Opportunities in Teaching

In September 1987 more teachers than ever before, both newly qualified and experienced, will be able to take the opportunity of joining the Inner London Education Authority. We are unique in being the country's only single purpose education authority whose sole aim therefore is to provide a high quality education service to the 750,000 pupils, students and adults who make up Inner London's ethnically diverse population.

There will be hundreds of permanent Scale 1 posts in NURSERY, PRIMARY and SPECIAL education (severe learning difficulties and hearing impairment only) and in SECONDARY subjects, especially CHEMISTRY, PHYSICS, MATHEMATICS and CDT. This challenge of working in an exciting educational environment and promoting equality of opportunity within ILEA's 950 schools also offers many benefits:

- \* Half day a week induction training for probationers and a high level of in-service training provision thereafter.
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- \* Pupil teacher ratios amongst the best in the country.
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- \* Job share opportunities for experienced teachers.
- \* Relocation expenses.

You are advised to apply early and offers will be made to successful candidates at interview. You can pick up a copy of our information booklet and application form at your college NOW or write to: RECRUITS, Room 67, The County Hall, London SE1 7PB, or telephone: 01-633 2081 (24 hour answerphone service).

Please state if you are seeking your first teaching appointment and where you saw this advertisement.

ILEA IS AN EQUAL OPPORTUNITY EMPLOYER

Working in Education

## Primary School Education

### Headships

**BERKSHIRE ROYAL COUNTY OF BERKSHIRE LAMBOURN CE (CONT) PRIMARY SCHOOL.** Lambourn, Newbury. N0R 2JQ. September 1987. Headteacher (Group 5). An attractive three bedroom detached house is available. Further details and application forms from the Director of Education (ES/SA), Shire Hall, 100010. Closing date: March 25th 1987. Berkshire has a scheme of reimbursement of lodging and removal expenses. An Equal Opportunity Employer. (350781) 110010

**BERKSHIRE HILTON PRIMARY SCHOOL.** Hilson Road, Caversham. N0R 2JQ. September 1987. Headteacher (Group 4). Application forms and further details from the Director of Education (ES/SA), Shire Hall, 100010. Closing date: March 25th 1987. Berkshire has a scheme of reimbursement of lodging and removal expenses. An Equal Opportunity Employer. (350781) 110010

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## Come and teach in Kent

### HEADSHIPS

#### NORTH WEST KENT AREA

Chantry County Primary School, Gravesend. Group 4. Roll: 115 (Aged 5-11) Plus 51 part-time nursery pupils.

Applications are invited for the post of Headteacher of this Multi-Racial Junior and Infant school for September 1987. The vacancy has arisen because of the promotion of the previous Headteacher.

Gravesend, Northcourt County Primary School. Group 5. School Roll: 174 (Spring Term). Special Unit Roll: 13. Nursery Roll: 80 (Part-time).

Required for September 1987, for Northcourt County Primary School. The post has been vacant following the retirement of the previous Head. Readvertisement: previous applicants should indicate whether they wish to be re-considered.

Further details and application forms for the above vacancies from the Area Education Office, 132 Windmill Street, Gravesend, Kent. (Enclosing a stamped addressed envelope). Closing date: 23rd March 1987. Possibility of help with temporary housing in approved cases. A scheme of Disturbance Allowances is in operation.

#### EAST KENT AREA

Diocesan and Payne Smith CE (Aided) Primary School, Broad Street, Canterbury, Kent CT1 2LU.

Applications are invited for appointment to this Group 4 primary school from September 1987. Applicants should be practising Christians and preferably be communicant members of the Church of England.

This is a re-advertisement and previous applicants need not apply. Further details and application forms available from the Area Education Office, 78 London Road, Canterbury, Kent CT2 8LT. (SAE please). Closing date 3rd April 1987.

#### MID KENT AREA

West Malling CE Primary School, West Malling, Kent. Group 4. Roll 180.

Required with effect from September 1987 for this controlled primary school. Application form and further details available from the Mid Kent Area Education Office, Axtley House, Hastings Road, Maidstone, Kent ME18 7BQ (SAE please). Returnable by the 3rd April 1987.

#### SCALE 1

#### NORTH WEST KENT AREA

St Botolph's Church of England (Aided) Primary School, Dover Road, Northfleet, Kent DA11 9PL. Telephone Gravesend (0474) 85737

Required for September 1987 a teacher for infants. This is a well resourced and forward looking school. The post would suit a newly qualified or more experienced teacher. Telephone enquiries and visits welcome. Closing date: 30th March 1987. Possibility of help with temporary housing in approved cases.

#### NORTH KENT AREA

Gillingham, Thames View CP School (Infant Department), Bloors Lane, Rainham, Gillingham.

Required from 27th April, 1987 for the summer term two temporary experienced infant teachers. Possibility of permanent posts in September.

Chatham, Swingate County Infant School, Sultan Road, Chatham, Kent ME5 8TJ.

Required for September 1987. Applications are invited from highly motivated, enthusiastic teachers, newly qualified or experienced, to work in an open plan school. A willingness and ability to take a full and active part in all aspects of school life is essential.

KENT County Council

Unless otherwise stated, applications should be sent to the Head of the School concerned. (SAE please).

## City of WAKEFIELD

### METROPOLITAN DISTRICT COUNCIL

#### EDUCATION DEPARTMENT

#### FIRST HEADTEACHER

SOUTH HENDLEY FIRST SCHOOL (Group 3) N.O.R. 116

Required as soon as possible, a suitably qualified and experienced teacher for the post of Headteacher of this 6-11 First School.

Application forms and further details available, on receipt of a S.A.E. from the Chief Education Officer, 8 Bond Street, Wakefield, WF1 2QL, to be returned by 27 March, 1987. (351785)

#### SCHOOL PSYCHOLOGICAL SERVICE

#### EDUCATIONAL PSYCHOLOGISTS (3 posts)

Wakingale for Education Psychologists

These three full-time posts are additional posts created to enable the Psychological Service to develop its range of services and intervention strategies. The successful candidates will complete a team of ten educational psychologists and will take responsibility for providing a service to a designated group of schools. Opportunities exist to develop specific areas of interest through membership of service teams. Applications are invited from fully qualified educational psychologists and from trainees completing their period of training in the summer. (Post Ref. Nos. 3114, 3115 and 3116).

Application forms may be obtained by writing to The Chief Executive, (Personnel Section), Town Hall, Wakefield, WF1 2HQ, or by telephoning Wakefield 443711. Enquiries, to be returned, quoting the appropriate reference number by 1st April, 1987. (14039)

## HEADTEACHERS

Required September 1987

#### EPPING COUNTY INFANTS SCHOOL

(Group 4 & L.F.A. £309 p.p.a.)

Coronation Hill, Epping. Closing Date: 3rd April 1987

#### THORPE COUNTY INFANTS SCHOOL, (Group 4)

Greenways, Southend-on-Sea. Closing date extended to 31 March 1987

Generous relocation allowances payable in appropriate cases.

Please send foolscap S.A.E. for form and details to:

County Education Officer, P.O. Box 47, Thredneedle House, Market Road, Chelmsford, Essex. CM1 1LD (12660)

ESSEX County Council

## HEADS (2 POSTS)

Post 1:

#### REDENHALL CANON PICKERING VOLUNTARY CONTROLLED JUNIOR SCHOOL, Harleston (Group 4)

Post 2:

#### PULHAM MARKET VOLUNTARY CONTROLLED PRIMARY SCHOOL, Nr. Diss (Group 2)

Re-advertisement. Previous applicants will automatically be reconsidered.

Further details and application forms for both posts may be obtained by sending a stamped addressed foolscap envelope to the County Education Officer, Room 32, County Hall, Marlborough Lane, Norwich NR1 2DL. Closing date for applications 27th March 1987.

Norfolk County Council

## Cheshire

### HALTON DISTRICT

#### HEADSHIP

Halton Lodge County Infant School, Grangeview, Runcorn, Cheshire WA7 6LU. Group 4

#### HEADSHIP

Astmoor County Primary School, Kinghead Close, Castlefields, Runcorn, Cheshire. Group 4

This vacancy arises as a result of the amalgamation of adjacent infant and junior schools.

Application forms and further details for both posts are obtainable from the District Education Officer, Grosvenor House, Shopping City, Runcorn, Cheshire. To whom completed forms should be returned by 27th March 1987. (00582)

## Headships

Applications are invited from suitably qualified and experienced teachers for the headships of the following schools: —

#### Hentley County Primary School

Group 3 Ages 5-11 Number on Roll 92

The school serves a pleasant rural catchment area centred on the village of Hentley approximately 1 mile north of Ipswich.

#### Chantry County Infants School, Ipswich

Group 4 Ages 5-7 Number on Roll 182

The school is situated on the south-western outskirts of Ipswich and serves a mixed residential area.

The appointments for the above posts will date from either the beginning of the Autumn Term 1987 or Spring Term 1988.

Further details and application forms are available from the County Education Officer, St Andrew House, County Hall, Ipswich, IP4 1LJ. (SAE please), and completed forms should be returned by 27th March 1987. (14944)

Suffolk County Council

## BMB

(An Equal Opportunity Employer)

PRIMARY HEADSHIPS available from 1 September 1987 at the following schools: —

#### BLACKROD CP SCHOOL

MANCHESTER RD., BLACKROD, BOLTON

#### HEAD TEACHER, GROUP 4

BRANDWOOD CP SCHOOL, BRANDWOOD ST., BOLTON

#### HEAD TEACHER, GROUP 6

ST. STEPHEN & ALL MARTYRS CE (AIDED) SCHOOL, RADCLIFFE ROAD, BOLTON

#### HEAD TEACHER, GROUP 4

The Governors invite applications from committed, practising Christians, preferably communicant members of the Church of England. Completed applications to be returned to Rowland S D Rudkin, St Stephen's Vicarage, Radcliffe Road, Bolton, BL2 9NZ by 25 March 1987.

Application forms and further details available from the Director of Education and Arts, P.O. Box 68, Pedderston House, Chole Green, Bolton, BL4 1NP to whom completed applications should be returned by 24 March 1987 or as otherwise indicated. (11990)



**Working in Education**

The Inner London Education Authority is committed to providing a high quality education service to one of the most ethnically and culturally diverse populations in Britain and is able to offer its teachers:

- \* Commitment to promoting equality of opportunity in education
- \* Pupil teacher ratios among the best in the country
- \* Half-day a week induction training for probationers and a high level of in-service training provision thereafter
- \* With some 950 schools, opportunities to broaden experience and enhance career prospects
- \* Excellent support staff and professional back-up, plus a range of central specialist resources
- \* Inner London allowance of £1,215 plus in many cases Social Priority allowance of £210-375 p.a. in addition to Bursary salary.
- \* All posts open to job share unless indicated otherwise (NJS). A Register for pairing potential job-sharers: contact EOPERS/ST, Room 533, The County Hall, London SE1 7BE. Tel: 01-433 8801.

Applications are invited from qualified teachers interested in working in this exciting inner-city environment.

Unless otherwise stated, application forms and further details are available from the Head of the school. Visits to schools, by appointment, are welcomed.

Unless shown differently, the closing date for applications is 27th March 1987.

**Nursery Education**

**Deputy Headship**

**TRIANGLE (N)**  
25 William Bonney Estate, Chesham Green, Bucks. RG8 7JH. Tel: 0494 350111.  
Closing date: 27th March 1987.  
Deputy Head (Group 2).

**Primary Education**

**Headships**

**ST ANDREW'S (BARNSLEY) C.E.**  
VA (JMB)  
Maidenhead, N. 11. QLB.  
Tel: 01-837 4048.  
Vacant 1 September 1987.  
The Governors are seeking to appoint a committed Christian, preferably a woman, to the post of Head of the school. The school is a voluntary aided primary school with 100 pupils. The Head of the school will be responsible for the overall management of the school and for the educational standards. The successful candidate will be expected to have a minimum of 5 years' experience of headship and to be a member of the Church of England. Applications should be sent to the Governors, at the school address.

**ST MARY, PUTNEY C.E. (JMB)**  
Fulham Road, London SW15 1BA.  
Tel: 01-788 9581.  
Vacant 1 September 1987.  
The Governors are seeking to appoint a committed Christian, preferably a woman, to the post of Head of the school. The school is a voluntary aided primary school with 100 pupils. The Head of the school will be responsible for the overall management of the school and for the educational standards. The successful candidate will be expected to have a minimum of 5 years' experience of headship and to be a member of the Church of England. Applications should be sent to the Governors, at the school address.

**ROBINFIELD (I)**  
Oxendon Hill, Herts.  
Vacant 1 September 1987.  
The Governors are seeking to appoint a committed Christian, preferably a woman, to the post of Head of the school. The school is a voluntary aided primary school with 100 pupils. The Head of the school will be responsible for the overall management of the school and for the educational standards. The successful candidate will be expected to have a minimum of 5 years' experience of headship and to be a member of the Church of England. Applications should be sent to the Governors, at the school address.

**THOMAS JONES (JMB)**  
Stoke Newington, London SE1 1JG.  
Tel: 01-433 8801.  
Vacant 1 September 1987.  
The Governors are seeking to appoint a committed Christian, preferably a woman, to the post of Head of the school. The school is a voluntary aided primary school with 100 pupils. The Head of the school will be responsible for the overall management of the school and for the educational standards. The successful candidate will be expected to have a minimum of 5 years' experience of headship and to be a member of the Church of England. Applications should be sent to the Governors, at the school address.

**Deputy Headships**

**DURAND (I) (NC)**  
Durand Gardens, Bristol.  
BS10 6DQ. Tel: 01-735 1048.  
Tel: 01-735 1048.  
Head: Mrs. M. White.  
Required from April. Deputy Head Group 2 (100 pupils) and experienced staff willing to participate in curriculum development. Must be an advantage ST FRANCIS CABBRI (JMB)  
Forest Hill Road, Honor Oak, SE20 3LE. Tel: 01-698 8882.  
Tel: 01-698 8882.  
Head: Mr. P. N. Clifford.  
Required from September. Deputy Head (Group 2). Practising Catholic teacher, with ability to lead and motivate committed colleagues through an integrated and developing curriculum.

**Inner London Education Authority**

**ILEA IS AN EQUAL OPPORTUNITY EMPLOYER**

**Cheshire**

**St Bridget's R C Aldred Primary School**

**Head Teacher - Group 4**

Applications are invited from suitably qualified and experienced practising Roman Catholic Teachers with a sound and imaginative philosophy for this post from September 1987.

Applicants should be committed to experience based learning and should be able to offer sensitive and energetic leadership.

Further details and application forms may be obtained from Mr W H Stevenson, District Education Officer, Priestley House, Sankey Street, Warrington, Cheshire and should be returned to Reverend Father P Hughes, St Stephens Presbytery, 101 Sandy Lane, Orford, Warrington, Cheshire by 27 March 1987.

**DEVON**

**COUNTY COUNCIL**

**AN EQUAL OPPORTUNITY EMPLOYER**

**PRIMARY HEADSHIPS**

**CUMBRIA**

**PRIMARY HEADSHIPS**

Required from Sept. 1987, suitably qualified and experienced teachers with commitment and enthusiasm for the following:

**NEWTOWN SCHOOL**  
Newton Road, Carlisle Group 3

**TRINITY C.E. SCHOOL**  
Windermere Avenue, Keswick Group 3

**SOUTH WALNEY JUNIOR SCHOOL**  
Walney, Barrow Group 2

**PARTON, ST. BRIDGETS SCHOOL**  
Parton, Whitehaven Group 2

**UPPERBY SCHOOL**  
Uldale Road, Carlisle Group 4

**ASHFIELD JUNIOR SCHOOL**  
High Street, Workington Group 5

**GREENGATE INFANT SCHOOL**  
Barrow Group 3

**ORILL INFANT SCHOOL**  
Egremont Group 3

Application forms and further details from The Director of Education, 5 Portland Square, Carlisle CA1 1PU (a.s.e. please). Closing date: 26.3.87. (49152) 110010

**BUCKINGHAMSHIRE**

**COUNTY COUNCIL**

**AN EQUAL OPPORTUNITY EMPLOYER**

**TINKERS WOOD COUNTY COMPOSITE SCHOOL**  
Brindley Avenue, High Wycombe HP13 5SE

**HEADTEACHER**

Applications are invited for the Headship of this Group 4 Composite School for appointment from September 1987.

Application forms and further details available from the Area Education Officer, Thame House, 9 Castle Street, High Wycombe, Bucks. HP12 3JH. Closing date: 27th March 1987. 110010 (35475)

**CUMBRIA**

**DALTON IN FURNESS C.E. SCHOOL**  
Coronation Drive, Dalton in Furness LA15 8QR

**HEADTEACHER**

Required from Sept. 1987 for this Group 4 school. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**EAST SUSSEX**

**HAMSEY COUNTY PRIMARY SCHOOL**  
Cockbridge, Lewes BN8 4SJ

**HEADTEACHER**

From September. Headteacher for this Group 2 school.

Application forms and details (a.s.e. please) from the County Education Officer, 10 Box 4, County Hall, St Anne's Crescent, Lewes BN7 1SG to be returned to the Head Teacher, Hamsey County Primary School, Cockbridge, Lewes BN8 4SJ. Closing date: March 27. (35469) 110010

**DEVON**

**COUNTY COUNCIL**

**AN EQUAL OPPORTUNITY EMPLOYER**

**WETSTON SCHOOL**  
Wetston, Devon PL20 1JH

**HEADTEACHER**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**HAMPSHIRE**

**WORTHING BOROUGH**

**AN EQUAL OPPORTUNITY EMPLOYER**

**WORTHING JUNIOR SCHOOL**  
Worthing, Sussex BN1 1JH

**HEADTEACHER**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**HEREFORD AND WORCESTER COUNTY COUNCIL**

**HAMPTON DENES PRIMARY SCHOOL**  
Church Road, Tupton, Hereford HR1 1RT

**HEADTEACHER**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**HEADTEACHERS**

**Primary**

**Buckfastleigh, St Mary's RC (Alded)**

**Primary School, Buckfastleigh, TQ11 0EA.**

**Headteacher - Group 2 (£11,436 - £12,876)**

**Readvertisement**

Required September 1987. Applicants must be practising Roman Catholics. This is an opportunity to become a Headteacher of a flourishing RC Primary School with strong links with Buckfast Abbey. The Abbey has an Educational Resource Unit that has recently gained the Heritage Trusts Sanctor Award for its facilities. Previous candidates are invited to re-apply. Application forms and further details available from and returnable to Dom Alden Conlon, Buckfast Abbey, Buckfastleigh. Closing date 27 March 1987.

**SCALE POSTS**

**Primary**

**Kingstington, St Michael's C of E (C)**

**Primary School, Kingstington, Newton Abbot (opening September 1987)**

Applications are invited from suitably qualified and experienced teachers for the following posts:

(i) **Scale 2 - Science and Technology**

An enthusiastic class teacher, initially based within Junior age range, to be responsible for developing Science and Technology throughout the school. Ability to take Boys' Games as an advantage.

(ii) **Scale 2 - Humanities**

An enthusiastic teacher to be responsible for the development of Humanities throughout the school. The successful candidate will be expected to coordinate the general educational policies within the Upper Junior age range.

Application forms and further details available from Area Education Officer, Oldway, Paignton, TQ3 2TE. Closing date 27 March 1987.

**Wiltshire**

**AN EQUAL OPPORTUNITY EMPLOYER**

**Primary Education**

**HEADTEACHER POSTS**

**FROGWELL COUNTY PRIMARY SCHOOL, HUNGERFORD LANE, CHIPPENHAM. SN14 0DG.**

**Group 6**

Following the retirement of Mr. E.M. Shaw, a Head Teacher will be required for this post from September 1987. The school is a voluntary aided primary school with 100 pupils. The Head of the school will be responsible for the overall management of the school and for the educational standards. The successful candidate will be expected to have a minimum of 5 years' experience of headship and to be a member of the Church of England. Applications should be sent to the Governors, at the school address.

**HOLBROOK COUNTY PRIMARY SCHOOL, HOLBROOK LANE, TROWBRIDGE. BA14 0PS.**

**Group 4**

A Head Teacher is required from September 1987 following the retirement of Mr. E.M. Shaw, a Head Teacher will be required for this post from September 1987. The school is a voluntary aided primary school with 100 pupils. The Head of the school will be responsible for the overall management of the school and for the educational standards. The successful candidate will be expected to have a minimum of 5 years' experience of headship and to be a member of the Church of England. Applications should be sent to the Governors, at the school address.

**Bere Alston Primary School, Bere Alston, Yelverton, PL20 7AU. (Roll 231)**

**Scale 2 (Two Posts)**

Required September 1987.

(i) Energetic and versatile teacher to take responsibility for co-ordinating upper junior classes in the first instance.

(ii) Teacher with sound understanding and experience of the early years curriculum (4-7 years) to take responsibility for infant department in the first instance. Applicants for both posts should state their particular curricular strengths and interests. Closing date 26 March 1987.

**SPECIAL EDUCATION**

**CROWDYS HILL SPECIAL SCHOOL, JEFFERIES AVENUE, SWINDON. SN2 8JH.**

**Scale 1 teacher required from the 1st September, 1987 to organize Cerebral Palsy and Down's Syndrome classes. Another area of responsibility is to be assigned to the Head Teacher by the 22nd March 1987 (a.s.e. please).**

Application forms and further details (a.s.e. please) returnable to the Head Teacher, Crowdy's Hill Special School, Jeffries Avenue, Swindon. SN2 8JH. Closing date 27 March 1987. (49149) 110010

**HERTFORDSHIRE**

**LENSFORD ST JOHN'S R.C. SCHOOL**  
St John's Road, Lensford, Herts. SG1 1JH

**HEADTEACHER**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**HERTFORDSHIRE**

**LONDON COLLEY R.C. SCHOOL**  
Colney, St. Albans, Herts. AL1 1JH

**HEADTEACHER**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**HERTFORDSHIRE**

**ABEY C.E. (V.A.) J.M.I. SCHOOL**  
Grove Road, St. Albans, Herts. AL1 1JH

**HEADTEACHER**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**HERTFORDSHIRE**

**EAST HERTS DIVISION**

**MILFORD COUNTY FIRST SCHOOL**  
Milkfield, Herts. SG1 1JH

**HEADTEACHER**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**HERTFORDSHIRE**

**ST. ALBANS R.C. J.M.I. SCHOOL**  
St. Albans, Herts. AL1 1JH

**HEADTEACHER**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**Deputy Headships**

**Second Masters/**

**Mistresses**

**BERKSHIRE**

**HILLSIDE PRIMARY SCHOOL**  
Rushy Way, Lower Earley, Reading RG2 7JH

**Deputy Head**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**BERKSHIRE**

**HILLSIDE PRIMARY SCHOOL**  
Rushy Way, Lower Earley, Reading RG2 7JH

**Deputy Head**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**SURREY**

**COUNTY COUNCIL**

**AN EQUAL OPPORTUNITY EMPLOYER**

**EDUCATION DEPARTMENT**

**DEPUTY HEADTEACHER**

**GROUP 4**

Required for 1st September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**ENGLFIELD GREEN COUNTY FIRST SCHOOL**  
Barley Mow Road, Englefield Green, Egham TW20 0NP

**Deputy Headteacher**

Required from September 1987 for this Group 4 school which caters for pupils aged 5-8 years.

Salary scale: £9,252 - £12,000 plus £309 Fringe Area Allowance.

Closing date 27 March 1987. (11338)

**SURREY**

**COUNTY COUNCIL**

**AN EQUAL OPPORTUNITY EMPLOYER**

**EDUCATION DEPARTMENT**

**DEPUTY HEAD TEACHER**

**GROUP 4**

Required for 1st September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**ST. MARY'S R.C. PRIMARY SCHOOL**  
Ashton under Lyne

**Deputy Headteacher**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**Deputy Headships**

**Second Masters/**

**Mistresses**

**BERKSHIRE**

**HILLSIDE PRIMARY SCHOOL**  
Rushy Way, Lower Earley, Reading RG2 7JH

**Deputy Head**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**BERKSHIRE**

**HILLSIDE PRIMARY SCHOOL**  
Rushy Way, Lower Earley, Reading RG2 7JH

**Deputy Head**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**SURREY**

**COUNTY COUNCIL**

**AN EQUAL OPPORTUNITY EMPLOYER**

**EDUCATION DEPARTMENT**

**DEPUTY HEADTEACHER**

**GROUP 4**

Required for 1st September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**ENGLFIELD GREEN COUNTY FIRST SCHOOL**  
Barley Mow Road, Englefield Green, Egham TW20 0NP

**Deputy Headteacher**

Required from September 1987 for this Group 4 school which caters for pupils aged 5-8 years.

Salary scale: £9,252 - £12,000 plus £309 Fringe Area Allowance.

Closing date 27 March 1987. (11338)

**SURREY**

**COUNTY COUNCIL**

**AN EQUAL OPPORTUNITY EMPLOYER**

**EDUCATION DEPARTMENT**

**DEPUTY HEAD TEACHER**

**GROUP 4**

Required for 1st September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**ST. MARY'S R.C. PRIMARY SCHOOL**  
Ashton under Lyne

**Deputy Headteacher**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**Deputy Headships**

**Second Masters/**

**Mistresses**

**BERKSHIRE**

**HILLSIDE PRIMARY SCHOOL**  
Rushy Way, Lower Earley, Reading RG2 7JH

**Deputy Head**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010

**BERKSHIRE**

**HILLSIDE PRIMARY SCHOOL**  
Rushy Way, Lower Earley, Reading RG2 7JH

**Deputy Head**

Required from September 1987. Applicants should be practising Christians and preferably communicant members of the Church of England.

Further details and application forms from The Director of Education, 5 Portland Square, Carlisle CA1 1PU. Closing date: 27.3.87. (49149) 110010



## WEST SUSSEX

**JOHN'S CE**  
**DOL**  
**, Bath BA 1**

**27th Apr**  
nated teacher  
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# Bexley Borough

**LONDON ALLOWANCE**

Application for further  
particulars from the Clerk to the  
Governor. Rev. E. F. ...  
64 Burke Street, Caning Alley,  
E1 2JF returned by Friday April  
3rd.

The Director of Education  
Education Office, 379/40  
High Street, Stratford, Essex  
SS16 5LH advised that Mr.  
... has been appointed as  
Assistant Director of Education  
for the City of London.

**Sociology Teacher, SCALE 1 (plus School for pupils aged 11-18 years)**  
A teacher of Sociology and Integrated  
The Sociology courses currently are GCSE (MEG Social Science) level teaching is shared with another teacher.  
An internally devised integrated course becomes a core subject for years 11 and 12.

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# Bexley London Borough

3rd. Director of Education  
Education Office, 379/38  
High Street, Stratford E1  
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## CORNWALL EDUCATION COMMITTEE

There is a Removal Expenses Scheme for teachers taking up permanent appointments from outside the County.

### SECONDARY SCHOOLS Comprehensive Headship Callington School, Launceston Road, Callington, Cornwall PL17 7BT. Group 11. NOR 1190. Sixth Form Of 100.

Applications are invited from suitable qualified teachers for the Headship of the above school.

It is anticipated that there will be 1143 pupils on roll in September 1987, including 102 in the Sixth Form.

The post will be available from 1st September 1987 following Retirement of the present Head.

Applications forms and further details on receipt of SAE, (Footscap) from The Secretary for Education (Schools Section), County Hall, Truro, Cornwall TR1 3BA.

Closing date Friday 27th March 1987.

### Mullion School, Meaver Road, Mullion, Helston, Cornwall TR12 7EB. Group 8. NOR 480.

**Mathematics: Scale 1**  
Required from September 1987. A well qualified teacher of Mathematics to assist in the development of this subject in this purpose-built Comprehensive School.

Application forms/further details are available from the Headteacher on receipt of an SAE.

### Saltash School, Wearde Road, Saltash, Cornwall PL12 4AY. Group 11. NOR 1290. Sixth Form Of 120.

**Science: Scale 1**  
Required from September 1987 an energetic well qualified graduate to offer Biology, Environmental Science and Physics as a member of a first class team teaching girls and boys in excellent specialist facilities.

Application forms/further details are available from the Headteacher on receipt of an SAE.

### PRIMARY SCHOOLS Primary Headship St Blazey Junior, Church Street, St Blazey, Par, Cornwall PL24 2NG.

Group 3. Available from 1st September 1987.  
Closing Date 3rd April 1987.

Application forms and further details are available on receipt of SAE (Footscap) for the Secretary for Education (Schools Section), County Hall, Truro, Cornwall TR1 3BA.

### COUNTY MUSIC SERVICE

Required as soon as possible or starting in September 1987, suitably qualified PERIPATETIC INSTRUMENTAL TEACHERS for the following FULL-TIME SCALE 1 POSTS.

### Brass - North Cornwall

To give Brass tuition in Secondary Schools at Wadebridge, Comelford and Bude, and to assist with the development of area wind ensembles.

(Three days)  
Applicants should also have a lively interest in supporting curriculum music in Primary and Secondary Schools which, together with opportunities for their own professional development will occupy the remaining two days of the week.

### Double Bass - West Cornwall

To give strong bass tuition mainly in West Cornwall Secondary Schools and to assist in the development of bass tuition in the County as a whole. It is desirable that applicants also have a lively interest in supporting curriculum music in Primary and Secondary Schools as plans for the future could involve an element of this type of work.

Further details and application forms available from James Sargent, Senior County Music Adviser, Devonian, County Hall, Truro, Cornwall TR1 3BA.

(14808)

### CORNWALL COUNTY COUNCIL

Required for 28th April or 1st September 1987, for  
MAIDENHEAD TEACHERS' CENTRE

### Head of Centre

BURNHAM HEADTEACHER GROUP 5:  
Candidates should be well qualified and experienced teachers, with ideas, energy and an insight into the professional needs of teachers.

The Head of Centre will lead and organise the activities of an important Centre offering local in-service education and resources for teachers. The five Berkshire Teachers' Centres work collaboratively with the County Advisory Service and this co-operative approach will increasingly be necessary in implementing the new forms of teacher in-service provision operative from this year.

Application forms and further details, including arrangements for an informal meeting for prospective candidates, from: Director of Education (PDC) Shire Hall, Shire Hall, Reading RG2 8XE.  
Closing date Wednesday 28th March.

An Equal Opportunity Employer

### Royal County of Berkshire

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Closing date Wednesday 28th March.

An Equal Opportunity Employer

### Royal County of Berkshire

## MIDDLESEX EDUCATION continued

**KENT**  
COUNTY COUNCIL  
EDUCATION DEPARTMENT  
NORTH KENT AREA  
SHERIFFS ST. THOMAS  
CHEVRE MIDDLE SCHOOL  
Kent ME12 2PQ  
Required for September 1987  
Scale 1 teacher for a second  
year class.  
Enthusiastic teacher of  
General Subjects required.  
Please state special interests  
and references to the Head  
teacher. (35810) 125622

## Secondary Education

### Headships

**BARNESLEY**  
METROPOLITAN BOROUGH  
EDUCATION COMMITTEE  
WOMSWELL HIGH SCHOOL  
Rabcock Street, Wombwell,  
Barnesley  
(11-16 mixed comprehensive  
n.o.p. 1354)  
Required for September,  
1987.  
HEADTEACHER Group 12.  
Application forms and  
further details obtainable  
from and returnable to the  
Director of Education, Barnsley  
Close, Barnsley S70 2HS by  
27th March 1987. (350070  
please). (35861)

**BERKSHIRE**  
ST JOSEPH'S R.C.  
SECONDARY SCHOOL  
Shaggy Calf Lane, Slough SL2  
3TW  
N.O.P. 335  
Applications are invited from  
suitably qualified and experi-  
enced practising Roman  
Catholic teachers for the  
Headship (Group 7) of this  
mixed Roman Catholic (Spe-  
cial Agreement) Secondary  
School (Age 12-16). Salary  
will be payable at the  
appropriate level for Group 7  
schools. The successful ap-  
plicant will be required to take  
up the appointment on 1st  
September 1987.  
Application forms and  
further details from the  
Director of Education (Ref.  
DC/SH/98) Shire Hall, Shire  
Park, Reading RG2 8XE (SAE  
please). Closing date 3rd  
April 1987. (35178) 130010  
An Equal Opportunity Em-  
ployer. (35178)

## Education Department

### Headteacher

Queen Anne School (Group 9) Queen  
Anne's Road, York, YO3 7AA.

11-16 Mixed Comprehensive, currently with  
about 690 on roll.

Suitably qualified and experienced candidate  
required for this appointment from January  
1988.

Application forms and further details  
(s.a.e. please) from the County Education  
Officer, Room 523, County Hall, Northallerton,  
DL7 8AE to be returned by 23rd  
March, 1987.

### NORTH YORKSHIRE COUNTY COUNCIL

## EDUCATION DEPARTMENT NORTH WEST KENT AREA

Dartford West Secondary School for  
Girls, Heath Lane, Dartford, Kent.

### APPOINTMENT OF HEADTEACHER (GROUP 9)

This is a non-selective school for girls aged 11-17. The school is  
situated in a pleasant area of central Dartford, and is consistently  
over subscribed. There are 630 pupils on roll.

This vacancy arises because of the retirement of the present post  
holder. A well qualified and experienced graduate teacher is  
sought to lead the school.

Applications and further details available from the Area  
Education Officer, 132 Windmill Street, Gravesend, Kent  
DA12 1BE, to whom they should be returned by 30.3.87.

The Authority operates a disturbance allowance scheme.  
Possibility of help with temporary housing in approved cases.

(14900)

### KENT COUNTY COUNCIL

Required for 28th April or 1st September 1987, for  
MAIDENHEAD TEACHERS' CENTRE

### Head of Centre

BURNHAM HEADTEACHER GROUP 5:  
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Application forms and further details, including arrangements for an informal meeting for prospective candidates, from: Director of Education (PDC) Shire Hall, Shire Hall, Reading RG2 8XE.  
Closing date Wednesday 28th March.

An Equal Opportunity Employer

### Royal County of Berkshire

## BURY METROPOLITAN BOROUGH OF BURY

An Equal Opportunity  
Employer  
**EDUCATION  
DEPARTMENT**  
HEADTEACHER (GROUP  
10)  
Required for 1st  
September 1987 at  
Brooklands High School,  
1121 Avenue, Bury BL9  
7OT.  
Application forms and  
further details obtainable  
from and returnable to the  
Director of Education,  
Education Office, Market  
Street, Bury BL9 9AT  
(Tel: 705 5419) by 27th  
March 1987.  
(35088) 130010

**HAMPSHIRE**  
PRIESTLANDS  
COMPREHENSIVE SCHOOL  
North Street, Pennington,  
Lyngdon SO43 8PZ  
N.O.P. 350 approx.  
HEADTEACHER Group 10  
School  
Salary Scale currently £19,260  
- £20,755  
Required September 1987.  
Applications to Area Edu-  
cation Officer, Cannon Street,  
Lyngdon, Hants. Enclosing  
a.s.e. for further details and  
application form. Closing date  
20th March. This is a re-adver-  
tise. Applicants will be auto-  
matically be considered.  
The County Council pursues  
a policy of equality of oppor-  
tunity. Applications particu-  
larly from people with disabilities.  
(44956) 130010

## HERTFORDSHIRE

**HILLSIDE UPPER SCHOOL**  
Hillside Avenue, Boreham  
Wood WD6 1HN  
No. on roll: 419 (15 to 19)

Applications are invited from  
suitably qualified experienced  
teachers for the Headship of  
this Group 9 mixed all-  
ability School from Septem-  
ber 1987.

Removal expenses of up  
to £2000 are payable in  
approved cases and a mort-  
gage subsidy scheme is also  
in operation.

Further details and ap-  
plication form from: The  
Divisional Education Offi-  
cer, West Boreham Wood  
Wood WD6 1LA (see  
please). (44872) 130010

## Education Department

### Headteacher

Queen Anne School (Group 9) Queen  
Anne's Road, York, YO3 7AA.

11-16 Mixed Comprehensive, currently with  
about 690 on roll.

Suitably qualified and experienced candidate  
required for this appointment from January  
1988.

Application forms and further details  
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### NORTH YORKSHIRE COUNTY COUNCIL

## EDUCATION DEPARTMENT NORTH WEST KENT AREA

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Applications and further details available from the Area  
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DA12 1BE, to whom they should be returned by 30.3.87.

The Authority operates a disturbance allowance scheme.  
Possibility of help with temporary housing in approved cases.

(14900)

### KENT COUNTY COUNCIL

Required for 28th April or 1st September 1987, for  
MAIDENHEAD TEACHERS' CENTRE

### Head of Centre

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Application forms and further details, including arrangements for an informal meeting for prospective candidates, from: Director of Education (PDC) Shire Hall, Shire Hall, Reading RG2 8XE.  
Closing date Wednesday 28th March.

An Equal Opportunity Employer

### Royal County of Berkshire

## ST. GEORGES SCHOOL, Shernhall Street, London E17 Required for September 1987

### Headteacher Group 10

(plus Outer London Allowance) required in this  
Catholic comprehensive school for pupils aged  
11-18 years.

The Secretary of State has approved the establishment of a  
new Roman Catholic Secondary School in the London  
Borough of Waltham Forest. St. Georges will be a 8 to 11 to 18  
school operating on the sites of Corpus Christi High School  
(11-14) and Cardinal Wiseman Senior High School (14-18).  
These two schools will close as St. Georges opens, on 1 Sep-  
tember 1988.

The Governors seek a practising Catholic teacher with the  
appropriate qualifications, experience and personal qualities to  
lead the new school at a time of rapid development in second-  
ary education.

Waltham Forest is a multi-racial area and the Governors are  
anxious to ensure this is reflected in their workforce. They  
welcome applications from people regardless of ethnic origin,  
sex or disability.

To assist in recruitment of teachers to this Authority a play-  
group has been opened for 5 days a week during term-time  
from 8.30 a.m. - 4.30 p.m. providing for teachers children  
from 3-5 years of age.

Application form and further details available from Chief Edu-  
cation Officer, Municipal Offices, High Road, Leyton, London  
E15 5DJ.  
Closing date: 27 March 1987

AN EQUAL OPPORTUNITY  
EMPLOYER  
Applicants are considered for their  
suitability for the post regardless of  
disability, sex, race and marital status.

Waltham  
Forest

## HEADTEACHER

Required for September 1987, for the fol-  
lowing GRAMMAR SCHOOL, which is  
one of the eight SELECTIVE SCHOOLS in  
Essex.

Colchester County High School for Girls  
(Group 10) Norman Way, Off Lexden  
Road, Colchester.

This Day School has a roll of 650 pupils  
aged 11-18 years with a sixth form of 180.  
Generous relocation allowances payable  
in appropriate cases.

Application form and details from  
County Education Officer, P.O.Box 47,  
Threadneedle House, Market Road,  
Chelmsford, Essex. CM1 1LD.  
Closing date: extended to 31st March  
1987.

(12809)

### ESSEX

County Council

Required for 28th April or 1st September 1987, for  
MAIDENHEAD TEACHERS' CENTRE

### Head of Centre

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Closing date Wednesday 28th March.

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Closing date Wednesday 28th March.

An Equal Opportunity Employer

### Royal County of Berkshire

# Computers in Education

A curriculum rich in computer sciences and technology? Kenneth Baker talks to The TES  
about his vision of City Technology Colleges



## Centres of excellence

Government plans to create a  
new generation of compu-  
ter-literate children have  
come under scathing attack  
from both the educational establish-  
ment and the information technology  
(IT) industry.

Last October, the Secretary of State  
for Education, Mr Kenneth Baker,  
launched the City Technology Col-  
leges scheme which calls for 20 CTCs  
to be established in deprived areas of  
England. The new colleges - for 11 to  
16-year-olds - will provide a curricu-  
lum rich in computer sciences and  
technology in an attempt to boost the  
numbers of new IT workers available  
in Britain by the year 2,000.

The unusual aspect of the plan is that  
the government is asking private busi-  
ness to donate £1m to establish each  
college and all that is offered in return  
is an increased chance for the com-  
panies to recruit suitably-qualified  
school-leavers.

But many computer companies have  
rejected the Secretary of State's plea  
for help, and companies such as DEC

and IBM are already making it clear  
that they wish to support the exist-  
ing educational system rather than CTCs.

"DEC have told me that they feel  
they are already doing enough in the  
existing educational system," Mr Baker  
admits. "But I am getting strong  
support from other sectors of industry  
- right across the board. I have had  
trials, traditional industries and the  
construction industry. A couple of  
firms have even said they may put  
money on the table before the elec-  
tion, and I think we will be able to open  
the first two colleges by September  
1988."

But Mr Baker has yet to quell the  
storm of protest building up within the  
local education authorities. Their main  
concern is that once again the govern-  
ment is attempting to sift gifted 11-  
year-olds out from the general popula-  
tion and promote the old evil of elitist  
schooling.

"There's nothing wrong with creat-  
ing centres of excellence," Mr Baker  
insists. "There will have to be some

countries and set up permanent soft-  
ware demonstration centres in nine  
British Council offices.

Our software is in English and runs  
mainly on Acorn BBC or RM com-  
puters; unfortunately Australia is the  
only English-speaking country with  
any number of those computers in  
their schools. There are many other  
smaller pockets of BBC computers in  
other parts of the world prepared to  
use English-language software, even if  
English is a second language for the  
learners. But the cost of supplying  
single copies of programs overseas is  
considerable.

There are two other possible paths  
into overseas classrooms. The com-  
monest arrangement is the sale of a  
licence to a foreign publisher, which  
grants the right to produce a version of  
the program in the appropriate lan-  
guage and machine version in ex-  
change for an advance or royalty.  
There have been some successful  
licensing deals: France, with its reputa-  
tion for favouring home-grown pro-  
ducts, has licensed Cambridge Uni-  
versity Press's *Picfile* in a version  
called *Picfile*. It was part of the bundle  
of software supplied to every  
French school under their "Micros  
Plein Tout" scheme.

In Italy, a joint venture by pub-  
lishers Ricordi and Paravia lists 50  
British programs translated into It-  
alian and, in most cases, versioned for  
IBM-compatible computers as well as  
the BBC machine. The companies  
embarked on this venture when the  
BBC seemed a likely contender for the  
state school system; the government's  
current commitment to MS-DOS com-  
puters makes future deals on this scale  
less likely, though the presence of the  
Master Compact in Italy with an  
Olivetti badge may create a market.

The cost of versioning for different  
computers is considerable, often little  
less than programming from scratch.

## RAY HAMMOND

form of aptitude testing for the child-  
ren who are to enter these colleges as  
we want children who have a particular  
aptitude for technology, but we don't  
want schools to be selective in the way  
that grammar schools are."

The main practical problem to the  
scheme pointed out by the teaching  
profession is that existing secondary  
schools already suffer from a drastic  
shortage of experienced teachers of  
computer science, maths, physics and  
other technology subjects. Local  
education authorities see the potential  
for a devastating brain drain away  
from state comprehensives as the best  
teachers opt to move across to the new  
colleges where their subjects will be  
taught with reverence. Baker has a  
radical idea for combating this  
problem.



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TES 3/87

## EXTRA

Educational computing has lost its way

## Blind alley

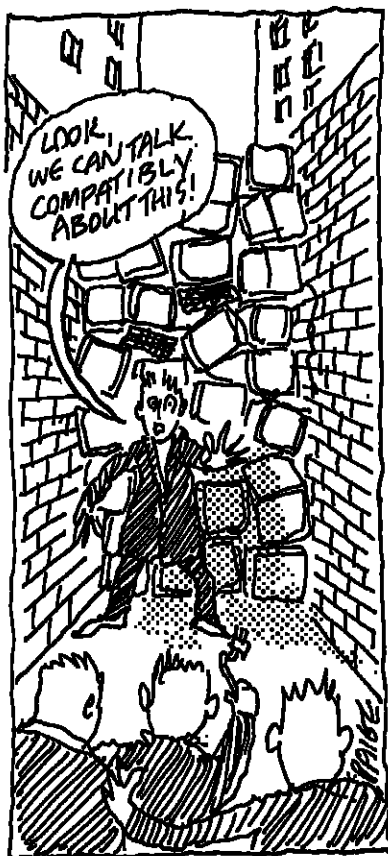
Educational computing in Britain has lost its way. The government's record of intervention in the hardware marketplace, combined with changes of direction over funding of support organizations, has left a legacy from which neither the current generation of school children nor the UK software industry may easily recover. The decision to axe the Microelectronics Education Programme was followed by a long hiatus before the half-budget Microelectronics Education Support Unit was even established. MESU has yet to make any serious impact on the uncertainty and confusion.

Meanwhile I.e.s.s. are grappling with hardware decisions that will determine the school experience of computing in the Nineties. They cannot buy BBC Model Bs; some are reluctantly buying Masters, others are tempted by the performance of the RM Nimbus while worrying about its imperfect compatibility with IBM. The Apple Macintosh is attractive, especially for those who see the possibilities of desktop publishing (see page 59). But Amstrad and other low-price IBM clones offer a safe bet, albeit based on technology that is already old-fashioned, if not actually obsolescent. The IBM PC was first based on a hybrid processor that's partly 8-bit, partly 16-bit.

Already, true 32-bit MS DOS compatible machines with megabytes of main memory are emerging, claiming speed increases of 1,000 per cent over the IBM AT. Twenty megabyte hard discs are becoming commonplace, and 40 or even 130 megabyte optional extras. Local education authorities are understandably nervous of jumping straight into the 32-bit world with no obvious sources of educational software, nor any easy means of transfer for all that BBC software. Education is already paying the price of being locked into non-standard hardware, and a proprietary operating system. A single country is too small to support a thriving educational software market, and it is economically disastrous to be cut off from the export market and the business world of MS DOS.

I.e.s.s. tasks have been complicated by a series of own goals from Acorn. It discontinued the Model B while it was still in high demand. They produced a series of expensive and half-baked upgrades that the market didn't want and which weren't quite compatible, instead of supporting the Model B and reducing its price. The 1985 launch of the Master 128 delivered the old technology at a new price without quite achieving compatibility at either end of the range. It alienated many small firms who market BBC peripherals and add-ons by in effect dictating changes ranging from minor amendments to a total rewrite or even product redesign. The Master 128 confused its market by claiming to have 128K of RAM when most people using ordinary software can in effect only use 32K at a time.

Acorn even made a mess of such technical improvements as the Master offered. Cartridge loading for ROMs might have been popular, had it not been for a cartridge-holder which must surely deserve an award for bad design. Providing an advanced disc filing system (ADFS) could have been a welcome step forward, had they pro-



JACQUETTA MEGARRY

vided a tolerable method of transferring files from the existing DFS format and thrown in at least a single disc drive. Even the ability to set up fixed starting conditions was spoiled by defective battery packs, an unfriendly system for setting the options, and no provision for a teacher to protect the settings from mischievous fingers.

In overdue response to criticism of the amount of desktop space taken up by its systems, Acorn finally produced the Master Compact. This is a cut-down but scarcely cut-price Master with many incompatibilities: 3.5inch discs demand suitable equipment and lots of time if you want to copy from standard floppy discs on to them. Only a fraction of the Model B's wealth of software is available in 3.5inch format, and both copyright and the new 1772 disc controller chip make difficulties for anyone who wants to copy.

The fact that there's no cassette port doesn't help schools with commercial software on cassette, and the omission of the standard disc filing system leads to further problems. The Econet interface is an optional extra, and the network won't work correctly unless you have ANPS (advanced network filing system) version 4.23 or later. Both disc and printer connections have been changed, and you cannot connect it to a colour television without buying an RF modulator. For schools with Model Bs and 3.25inch disc drives, then, the Compact means a nightmare of incompatibilities.

The result of all this tinkering is that in 1987 the BBC series of micros is obsolescent, overpriced, underpowered. The Master 128 isn't fully compatible with either the Model B or the Compact, and the Master 512 isn't compatible with the IBM PC. The

financial crisis and Olivetti rescue only widened a credibility gap that was already yawning. For too long, Acorn has taken the education market for granted, assuming it to be captive because of the large supply of educational software, the number of teachers that have painfully acquired some familiarity with BBC software and the belief that there are too many of them around in schools and colleges to write off.

But, as Kenneth Baker admits, British secondary schools have only one micro for every 60 children. No wonder only 20 per cent of head teachers think that computing has made a significant contribution to teaching. To achieve anything serious, computers must be integrated into the mainstream of education, which means an immediate expansion to ratios more like one per 10 secondary pupils and one per 20 primary. That means multiplying the number of systems by six.

Originally, the BBC and Acorn collaborated to produce an educational micro and the DTI, by endorsing it, made it a *de facto* standard. At the time, this looked like an avenue for progress. It now looks more like a blind alley. The launch of the IBM PC changed the micro scene irreversibly. The Amstrad-led price revolution has reinforced that change and underlined how uncompetitive the Acorn products are. The "stack them high, sell them cheap" philosophy could bring prices within reach of a sensible level of classroom provision. And the only standard the real world recognizes is IBM compatibility.

There have been moves at a European level to agree a standard educational system, and this could not only help to develop a viable software market but also improve the mobility of computer professionals and the credibility of school computing. Olivetti is keen on IBM compatibility, but Acorn is arguing for its proprietary RISC machine, while Philips (Netherlands) and Thomson (France) want to base the system on the Motorola 68000 family.

For many educational purposes the speed of the processor and the size of the memory may be irrelevant. In primary schools an obsolescent micro may actually be preferable to a leading-edge system. But secondary pupils need to gain familiarity with the operation of modern commercial software such as programmable databases, high-powered spreadsheets, page-making software and searching CD-ROMs - all of which is made difficult or impossible within the constraints of the BBC's outmoded technology.

Secondary education needs standardized 16-bit systems that are reliable and easy to transport software into. It may be that the era of the single, all-purpose work horse is over, and that, at least in secondary schools, computing is moving towards dedicated machines for different purposes, such as word processing/desktop publishing, CAD/CAM, control, if so, they will have to become dramatically easier to use and employ standardized operating environments which are the same on any computer. Otherwise education will never catch up with the need to train all those teachers in all those different systems.

## Pot-pourri

Proceedings of the 1986 MUSE Summer Course Part II 53  
MUSE Report No. 10, PO Box 43, Houghton-on-the-Hill, Leics LE17 9QX

This booklet is a curious mixture: its first half is a *pot-pourri* of short reports carried over from Part I, followed by an extended article on the place of information technology in the secondary curriculum. There may be people who want to read over 15,000 words on the latter; but they are a different group from those who want to complete the coverage of the MUSE conference begun in Part I. I suspect both groups would have been better served by a more logical division between the two publications.

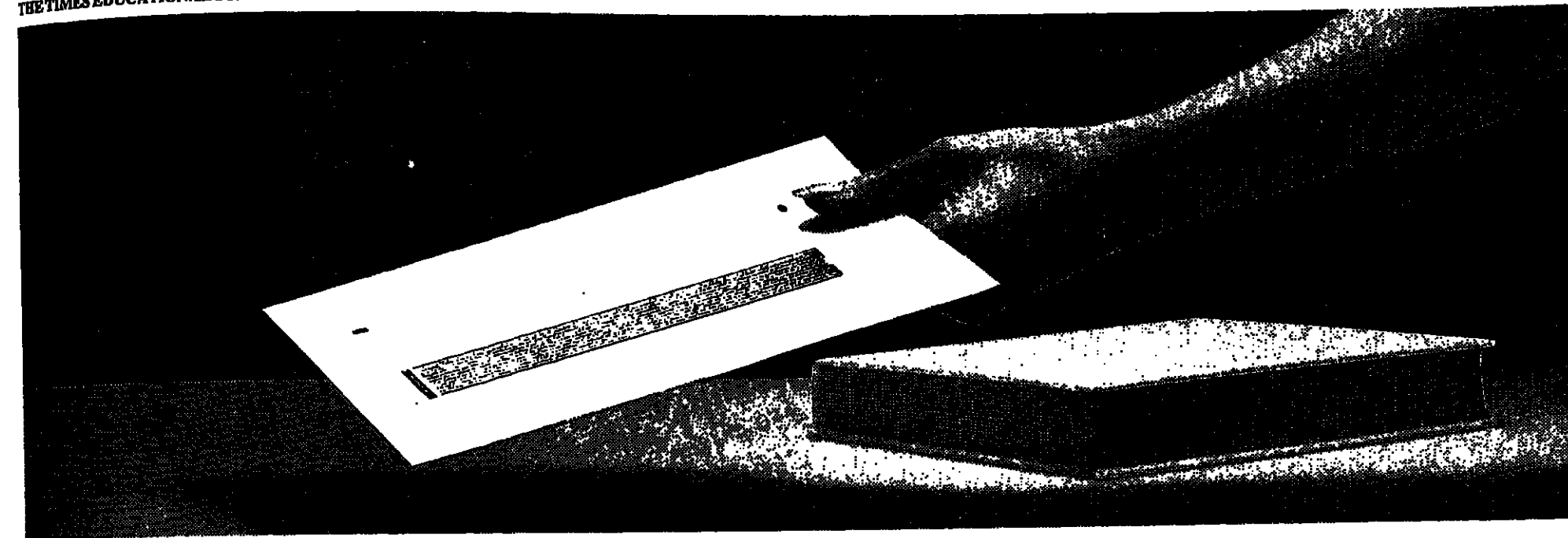
Two summaries refer to Research Machines' networked Macintosh Neave discusses comparative computer and network systems. And Terry's report on

terms, and also compares implications for software access. He suggests that a well-used network needs a minimum of three hours a week "housekeeping time" and demonstrated Access, a friendly front-end that shields the user from having to cope with remembering codes, commands and filenames. Pat Hamblin's session reported teaching troubles with a Nimbus network in a Sevenage school.

The summary of Jon and Rosalind Nichols' work with PROLOG is disappointing: apart from the chronology this does little more than headline the areas where important work has been done. Yet Ros Nichols' achievements with pupils who have special learning difficulties deserve more than half a sentence. And Terry's report on

telesoftware and Prestel Education fares better, as do two presentations on word processing (with *Wordwise* and *Wordwise Plus*). But the overall impression is of inconsistent report allocation and an uneven standard of reporting.

Jan Blinbaum's paper covers some important debates, even if at times the length. He points out the convergence between technologies for storing data, text, image and video, and singles out interactive video as covering a wide range of data types. Oddly, he doesn't mention compact disc media (CD-ROM, CD-Interactive or CD-Video). He argues that learning about information technology should be developed on the existing curriculum. Learning with IT, he helps to shift the learner's role from spectator to participant and creates



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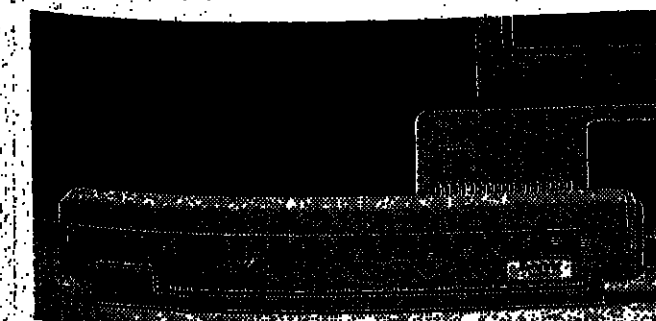
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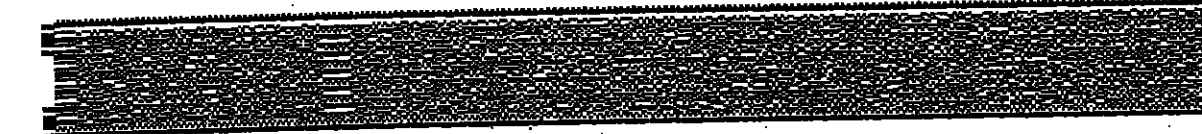
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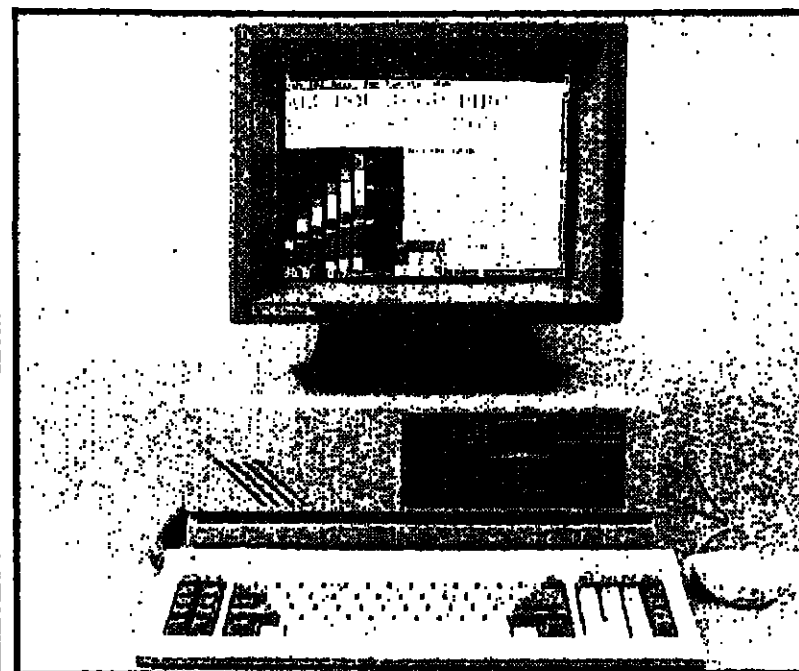
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EXTRA

## The technicalities



## Number crunchers

GEORGE ROBINSON

Research Machines, the most successful manufacturers of educational micros, have launched two new series of powerful computers suitable for secondary schools and further education. In addition, the company has re-affirmed its longstanding commitment to schools by introducing an enhanced version of its best-selling Nimbus PC 186 micro.

The new ranges, called the RM Nimbus AX 286 and VX 386, utilize the powerful Intel 80286 and super-fast 80386 microprocessors to offer users very powerful computer facilities in low-cost packages.

Almost alone among British micro-computer makers, RM (as the company now chooses to be known) has maintained growth and profitability

during the past three years when many other manufacturers have faced profit slumps or have been forced out of business. One of RM's strengths has been the development of networks and, with 40,000 systems supplied to schools, polytechnics and universities, the company now has one of the largest installed network bases of any computer company in the world.

RM have been careful to ensure that the new machines offer full compatibility with the existing Nimbus PC 186 range and it is for this reason that many secondary schools will be interested in up-grading to either the new PC 186 or to the more powerful models. All of the software which has been developed for the existing Nimbus machines will run on the new models. In addition,

the re-styled Nimbus PC 186 now includes IBM PC emulation, support for interactive video and the ability to run much of the BBC BASIC and IBM PC software. This effectively offers schools the ability to use the computer in the IBM, BBC and RM software environments.

The AX and VX machines will be of interest to secondary school maths and physics departments where there is the need for high number-crunching ability or for extensive networks. The AX 286 micro is IBM AT compatible and, with the 286 microprocessor running at 12MHz, it offers one megabyte of RAM as standard. The provision of a special on-board expansion slot allows users of the 286 to up-grade to 386 specification at a later date if required.

The advanced VX 386 micro runs the 32-bit 386 microprocessor at 16MHz and, in basic format, the machine is offered with two megabytes of RAM. In addition an 80387 maths co-processor and cache memory is available to enhance high-speed performance even further. In its most advanced configuration, the 386 machine becomes a powerful workstation capable of emulating mini-computer performance.

All of the new models are supplied with 5.25inch floppy disc drives and offer hard disc options as well as six expansion slots for additional circuit boards and a mouse interface.

The new machines all support the existing RM network as supplied by the company, but they are also able to operate on the increasingly dominant Ethernet and Token Ring local area networks. All systems are supplied with MS DOS 3.2 and Microsoft Windows software and Xenix is available as an option.

For graphics use, including the increasingly important desktop publishing application, the new AX and VX machines offer standard support for EGA, Hercules and MDA graphics standards and the enhanced EGA 640 x 480 screen pixel mode can be supported. This latest specification is now emerging as an industry standard and supplies squarer pixels which are especially useful for desktop publishing applications. In this mode up to 37 per cent more data is available on screen than in conventional graphics.

Price indications for the new series are £1,795 for a disc-less network station, £2,695 for an AX 286 with a 20 megabyte hard disc and £4,995 for a VX 386 with a 40 megabyte hard disc. The first batch of machines will be available in April and volume production begins in June.

RM can be contacted at Research Machines Ltd, Mill Street, Oxford OX2 0BW (tel: 0865 249866) for further information.

## Sir Clive's new micro



## Work horse

Sir Clive Sinclair's new battery-driven portable microcomputer, the Z88, could prove to be an exceptionally useful educational tool. The new machine - unveiled at last month's Which Computer Show - is the size of an A4 page, less than an inch thick and weighs under 2 lbs. Most interestingly, for education, Sir Clive has opted to use BBC BASIC as the machine's built-in programming language.

Were it not for Sir Clive's tarnished reputation, the new portable might be heralded as a real breakthrough, as it seems to combine all the essential computing functions in a very light box for under £230.

The problem is that Sir Clive has specifically chosen to ignore the advice of his PR and marketing consultants and is initially offering the machine to the public via mail order. His new company, Cambridge Computer Ltd, is soliciting pre-paid orders months before he says the machine will be available and Sir Clive has confirmed that he intends to bank his customers' money as it is received.

Two years ago, hundreds of thousands of customers sent mail-order money to Sir Clive's old company, Sinclair Research, for the much-hyped Sinclair QL computer and the majority of customers ended up waiting months for machines which, when they arrived, did not meet the promised specification.

"I promise I will be able to deliver this machine in April," Sir Clive said at the launch, answering a jibe that the "88" part of the computer's title was a more realistic forecast of the machine's true availability date. "We haven't quite finished the software," he admitted, "but there will be no problems." If the machine is produced on time and proves to perform as promised, a

large number of school children are likely to find it an ideal work horse. It is the first portable that is really light enough to be carried everywhere and built-in word-processing and spreadsheet software is fully integrated. Other built-in software includes a diary, a simple database, a calculator and a communications program.

Existing BBC Basic programs can not immediately be ported across to the Z88 as the new machine displays information differently, but third-party software houses are certain to make translation programs available and, if Sir Clive manages to produce the 10,000 machines a month he has promised, it is likely that by the autumn term many BBC programs will be running on Z88.

The Z88 displays its information on a built-in "enhanced" LCD screen with eight lines of 80 characters. The screen can be divided into "windows" and the Z88 can run several tasks at once. Although the machine is based on the old-fashioned Z80 micro-processor, this chip has been supplemented so that it can address up to three megabytes of RAM.

In its basic form the machine is supplied with 32K RAM built in, of which only 15K is available for use (this will store about eight A4 pages of text). Cambridge Computer are offering add-on 32K and 128K RAM cartridges as soon as the machine is available and Sir Clive says that later in the year one-megabyte cartridges will be offered. Cables for printer connection and for reading IBM-style disc drives will also be offered with the machine.

Further details and mail-order forms are available from Cambridge Computer Ltd, FREEPOST, Cambridge CB4 1BR.

## Pass word please

JACQUETTA MEGARRY

The Tandata P.A. Workstation: P.A. 100 (128K memory with 12inch RGB monitor) £1,149 + VAT. Tandata Marketing Ltd, Albert Road North, Malvern, Worcs WR14 2TL.

For all the talk about converging technologies, the bold concept of a single integrated desktop system is still far in the future. Most people who use modern communications soon find their horizontal surfaces a clutter of incompatible devices that won't talk to each other - telephone, disc drive, answering machine, modem, micro-computer etc. Tandata, noted for their modems and Prestel adaptors, produces the PA series of voice/data workstations.

The PA 100 does what it claims to do very well: access to electronic mail couldn't be easier, with a fast built-in modem, simple driven software and a superb monitor as back-up to the LCD display. A couple of key presses after switch-on are enough to make the system dial the BT Gold computer and send all those awful NUI and ADD codes automatically; you see this on your screen, hear the telephonic activity through the excellent loudspeaker and only intervene to send your password.

The PA is very versatile, with built-in firmware covering diary, telephone address book, notepad, calculator and spreadsheet. You can get it to dial phone numbers by name, using its hands-off telephone; it plugs into any modern-style phone socket. Detach the keyboard from the monitor and you have a lap-held micro - 128K of battery-backed RAM is standard, the 256K model costs £150 extra, and a further 256K costs £299.

However, the system isn't intended for serious word processing, as the facilities are very limited. The lack of word-wrap seems primitive, and a four-figure price I'd expect better of the documentation: photo-reduced dot-matrix output without an index. For IBM PC users, a £19 disc and cable kit overcomes the Achilles heel - lack of a disc drive - by allowing exchange of a disc drive with a corrected disc-based machine. Without this, you can archive only on audio cassette.

There's a cheaper version, the PA 80, at £999, with 64K memory, no phone, no monitor and much less software; it's intended for front office use, rather than portable use. But at these prices I'd want a machine that responded intelligently to incoming calls, replying to a voice message or accepting electronic mail as appropriate. Roll on the day after tomorrow.



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EXTRA

## A 'snapshot' of the current use of computers in secondary education

The "Skills for the Future" project was launched at the University of Sheffield in April 1986 with financial support from the Manpower Services Commission. The general aim was to examine the links between education and employment in the field of information technology. One of the subsidiary aims was to gain an overview of existing provision in computer education in secondary schools.

The project team decided to use two methods in gathering information on computer use in secondary schools. The first involved visiting a small sample of schools across the country, some of which were involved in the Technical and Vocational Education Initiative. It was then decided to follow up some of the issues emerging from these "case studies" by using a questionnaire to be distributed to a much larger sample. For a number of reasons (mainly time, money and ease of distribution) The Times Network for Schools (TINS) was chosen for carrying out the survey by electronic mail.

The questionnaire was sent to all the secondary schools that subscribe to TINS, which is just over 1,000 in England, Wales and Scotland. This cannot be regarded as a simple random sample, since those subscribing to TINS and responding to our questionnaire are more likely to be "computer oriented" schools, having more computer facilities and using them in various curriculum areas. The results of the survey, therefore, can probably be seen as representative of the most computer-orientated schools in the country. As such they give an idea of the maximum levels of IT involvement in schools.

Schools were asked to provide the following kinds of information about their resources, their courses, their support, and their approach to IT in the curriculum:

- Basic information on the school itself
- Details of hardware: number and type of computers, networks (if any), distribution of computers, details of peripherals
- Staff support for IT: teaching staff, non-teaching assistance (if any) of different kinds
- Courses offered to pupils in computing, eg computer awareness, computer studies
- School courses and curriculum areas using computer assisted learning (CAL) or IT in any way

The questionnaire was designed so that this basic information could be supplied as easily as possible. In addition, the final part allowed schools to describe in their own words any aspects of computer use in the classroom that had not been adequately covered. A large number of the schools provided much interesting information in this open section.

A vast amount of information on computer education was collected by means of the "electronic questionnaire". An encouraging response was received, with many schools taking the time and effort to explain at length their own approach to computer education. The main points which emerged are summarized below (a full account will be published later in the year).

## Computer study

JERRY WELLINGTON

encouraging response was received, with many schools taking the time and effort to explain at length their own approach to computer education. The main points which emerged are summarized below (a full account will be published later in the year).

## RESOURCES

Schools were asked to give information on the number, type and location of all their computers. The BBC Micro still dominates the school market, with 84 per cent of all computers coming from this source. Commodore and Research Machines (RM) came a very distant second, with only 10 per cent of the total between them.

The average number of computers per school was 23, but this varied considerably (between four and 63) according to school size, degree of computer orientation and availability of funds, most notably in the form of TVEI support. The ratio of number of computers in a school to the number of

pupils varied enormously. The average number of pupils per computer was 44. For TVEI schools, however, the average was only 26, compared with 47 for non-TVEI schools. The pupil:computer ratio varied considerably from 7:1 in one school to 14:1 in the "worst" case.

The lack of sufficient hardware in schools is seen by teachers as a significant impediment to the spread of computer education across the curriculum. However, the survey clearly indicates that two other factors restricting the diffusion of computer education throughout schools. The first concerns the distribution and organization of hardware. The second involves staff support.

## ORGANIZATION

More than two-thirds of all computers in schools are located in designated computer "laboratories" or computer rooms. The remainder appear to be sited in a variety of departments

around schools with business studies and science the most common, but even in these two areas the numbers involved are very small.

The fact that the bulk of secondary school hardware is located in computer rooms or "laboratories" must present a serious impediment to the widespread use of computer assisted learning in subjects such as modern languages and even mathematics departments where less than three per cent of all computers in our survey were located.

A further impediment to the diffusion of CAL is the use of networking. Our survey indicates clearly that the networking of micros within computer rooms is closely related to the absence of computer assisted learning in a number of subjects. In other words, schools with networking facilities are less likely to be using CAL across the curriculum.

This finding is particularly interesting in the light of the fact that "networked" schools tend to have considerably more computers. However, the computers in "networked" schools are more clustered in computing laboratories, on average 17 as opposed to 11 in non-networked schools.

No explanation is offered here to account for these effects. This is an area that merits detailed study, particularly in view of the expenditure involved. It may be the case that the human element is the key factor: the clustering of computers in dedicated "laboratories" is discouraging enough for some teachers who may have to drag a class across the school to involve them in a computer related activity. But familiarity with the operation of a network, often seen as the realm of the "school expert", may be perceived by many others as the final barrier.

## SUPPORT

All schools were asked to outline the assistance given to teachers by either non-teaching staff or pupils. By far the most common non-teaching assistance provided came from pupils - it seems that pupils are widely used for altering programs, copying discs, helping with networks, maintaining software libraries and many other tasks. There were very few schools with technicians having responsibility for IT, although some science technicians are used in this area. In all, just over two thirds of schools responding reported that they had no dedicated help in computer education.

Analysis of the results of our survey shows that schools with technical assistance in computing had a larger average number of subjects using CAL regularly (2.5 subjects) than schools without technical assistance (1.7 subjects). These results give a clear indication that the use of computers across the curriculum is enhanced by the presence of non-teaching assistance.

## COURSES

Ninety-one per cent of the schools were providing examination courses with an essential computer element (eg computer science, computer studies). Seventy-eight per cent of these were providing computer studies courses specifically for O/GSE exams.

Eighty-nine per cent of the schools ran non-examination courses incorporating an essential computer element. Seventy-two per cent of these ran computer awareness/applications appreciation courses, often for form lower down the school - almost half of these courses were in Year 1.

## CAL

The presence of computer assisted learning (CAL) and some of the possible barriers to its spread into a range of school subjects have already been mentioned. One interesting aspect of the survey was the extent to which CAL is used in schools, in which age groups, and in which subjects. Two-thirds of all schools reported that CAL was being used in subject teaching.

Interestingly, CAL was most commonly used in Year 1, particularly for pupils with special needs. Higher up the school, science and mathematics were the most common users of CAL with CDT a close third. The use of CAL in all subjects dropped off dramatically in Year 5 - possible explanations of this effect are left to the reader.

The results reported above are brief summaries of the vast amount of information collected from answers to specific questions. In addition, a large number of schools made general remarks on their approach to computer education. Two general trends are clearly visible in their replies.

The first was a desire to move away from examination courses in computing towards more widespread use of CAL across the curriculum. However, to many schools, one of the greatest restrictions on the growth of CAL is the availability of hardware.

"Computer equipment is used almost all the time. When not used for computing examination work other departments grab any available time."

As all machines (except one) are in the computer studies room which is used for 32-40 periods, there is little scope at the moment for CAL.

As a result, some schools felt that the only way to encourage CAL was to drop examination courses in computing.

"We are dropping computer studies as an examinable subject, concentrating on IT, with a firm commitment to spread IT across the curriculum."

The latter comment indicates a second trend. Use of the term "formation technology" (IT) and the presence of courses in IT rather than, say, computer studies or computer awareness appears to be increasing.

The prime purpose of this survey has been to bring out the main points emerging from the survey in order to raise general issues. It would be foolish to claim that hard and fast generalizations can be made from a survey such as this which could be applied to the whole of secondary computer education. However, two key points do emerge which could provide pointers in planning for the future.

First, there are a number of barriers to the widespread use of computers across the secondary curriculum. These include the shortage of hardware, the organization and distribution of computers, and the absence of teaching assistance, and the absence of examination courses in computing. Second, the use of an "electronic survey" of this nature can be valuable in providing an overview or snapshot of the current use of computers in secondary education, so long as its limitations are not forgotten.

Full details of all the information collected in the survey can be found in the report published in the Journal of Computing Education, Vol. 18, No. 1, 1987. The report will also be available to schools on request. Write to: The Times Educational Supplement, 1, The Quadrant, London WC1N 3JF.

EXTRA

The situation in primary schools  
Where is the help?

DAVID MARSHALL

According to Kenneth Baker, and he said this with pride at the opening of the Hi-Tech Exhibition in January, there is one computer for every 120 primary school children in England and Wales. (The figure is one in 60 for secondary schools). As the average primary school has about 200 children on roll, that means one and two-thirds micros per school - for argument's sake, I'll allow two. And this is wonderful!

After more than three years of MEP (the Microelectronics Education Programme), four years of MAPE (Micros and Primary Education), several Departments of Trade and Industry state publicly, we are still trying to devise a syllabus based on access to a computer one day a week. What's more, at least 10 primary schools have 10 or more micros, so there must be many that have none at all.

An average primary school will be about 25 years old and on two levels, which means it was built pre-micro-electronics. The corridors and doorways are too narrow and awkward for a micro trolley. The classrooms have only one power point - usually badly positioned. This makes immediate access to a micro very difficult and has discouraged many teachers altogether.

Those teachers with greater experience often see the benefits that a micro can bring and take them to their children with zeal, but the provision in universities and polytechnics for new entrants to the profession to acquire a thorough knowledge of micros and primary software is only just better than lamentable.

Over 30 per cent of primary schools in this country have four or less teachers. For two of them to attend the necessary in-service training sessions to qualify for a micro must have been difficult, and to persist and realize the machine's potential well-nigh impossible. The subjects expected to be taught

by those in authority are many and various. Also many teachers have been working to rule, at least, for the last year or more. So was it ever reasonable to expect teachers under these pressures to take a micro on board with anything less than reserve?

The average school above will have spent around £150 on software over the last two or three years. So if the way in which micros were introduced into primary schools has made us the envy of teachers abroad, then how much more must the countless number of software programs available for our primary schools. But there are too many and their complexity and variety are bewildering.

The best-selling items of software have sold around 10,000 copies in total. That sounds good but when you consider that there are 30,000 primary/middle schools, what are the other two-thirds using? One software house I spoke to reckons on selling 1,000 to 1,400 copies in order to set its prices. If they sold more, then they had a bonus to produce more material in the future.

With the drive to introduce a micro fast disappearing, and belts still being tightened, who is buying software? If you have only £150 in your school to spend, to choose the best or most appropriate is a nightmare, and where is the help now that MEP has gone?

Prestel offers a lot of good advice and The Times Network for Schools (TINS) database is improving daily. But unfortunately Gordon Jones, Director of TINS, has evidence that some I.e.s.s. have deliberately chosen not to use the necessary modems in primary schools.

One of the best results from the days of MEP is the RESOURCE software stable. This organization, which continues to release superb programs, is

sponsored by the I.e.s.s. of Sheffield, Barnsley, Doncaster and Humberstone. These four authorities use support teachers to go around providing help and guidance in schools - an idea slowly gaining ground elsewhere. Staffordshire has 11 such teachers and a centre in Stoke, East Sussex has five and a centre in Brighton - both organizations work well. It is disturbing, though, that so few authorities recognize the usefulness of the advisory teacher, and without the backing of the Education Committee, they will not get the financial resources. There are other examples of good I.e.s.s., but the political will has to come from above - you need the money, and a figurehead or two helps.

All is not gloomy, however. There are schools where the children have immediate access to a micro when appropriate. History can come alive as they answer questions as a Norman or a Viking, or act as navigator on a medieval ship, or discover Egyptian artefacts. Mathematical insights can be gained thanks to *Snail* 1 and 2, or *Simwam* 1 and 2. Children can collaborate on a piece of creative writing, constantly improving it, with the help of several simple word processors. Their imaginations can be released by a powerful adventure game. They can "draw" with precision with their hand-held Mouse. When the children's week is over, they can record events on their database, and present them as a newspaper with *Page Maker*, *Fleet Sireer* Editor or *Front Page Extra*. They can even send their work all over the world by electronic mail.

In some places the seeds have really taken root and children are enjoying the many benefits of the micro revolution. However, they are the lucky exceptions. They happen to be in the right place, at the right time.

David Marshall is head teacher of Rochdale Park CP School and a regular adviser for Computers in Education for East Sussex.

## Networking - a possible solution

## The way forward

DAVID PLAYFOOT

Not so long ago we were all lugging our micros into the teachers' centre to be compulsorily in-serviced into the mysteries of the computer; that surge of interest, buoyed up by hard cash from central government, involved all teachers in the newest area of the curriculum. The future of the micro in primary schools seemed assured.

After the initial excitement we began to discover the problems. First, the hardware itself and the problems brought by the cassette recorder. Then there was the software; often dull, frequently inappropriate and graphically uninspired. And when you found the program you really wanted it probably didn't work on your micro or it was too expensive.

The disc drive was a giant leap forward for classroom teachers and their pupils. To try and develop computer studies with two micros relying on cassette recorders can be done, but it's not easy. Floppy discs have brought their own problems, though. They get lost, cost a lot of money and can be inaccessible once loaded. Although software houses have improved their documentation, the computer companies themselves and the contributors to educational computing magazines still produce what is a foreign language to most teachers. There is nothing more off-putting than loading a program only to find you have a cursor and some indistinguishable numbers and letters across the bottom of the screen.

Some I.e.s.s. have now set up advisory teams and given relatively general advice to the whole area, but this has been only partially successful.

Given the impossibility of support going to every school, advisers have tended to work in pieces where staff commitment was high and create a small number of schools which could act as exemplars of good practice. We have the extra resources to help particular schools' needs; and third, to

use the shared facility in relation to pre-delivered data, such as booklists, software guides or reference material specific to a particular subject.

The other exciting development is the use of word processing - long established in some schools, but almost unheard of in many. At one -12 middle school, children have been writing items for their magazine and sharing the results through the network, then printing them on a centrally located printer.

The siting of micros or "stations" around the school can make the machine seem much more an integral part of the environment and, therefore, more frequently used by the teacher. One member of staff in a primary school summed it up by saying, "To have a comprehensive menu available simultaneously at several stations and at the touch of a button makes the present wheeling and hawking of discs and hardware look both primitive and frustrating".

Needless to say, there are problems but the technological ones have been largely overcome. Two crucial ones remain - finance and in-service training. The latter is relatively simple because there is the expertise in most schools - it just needs developing; the former needs I.e.s.s. and central government commitment.

Mr Baker rightly extolled us at the Hi-Tech Exhibition to embrace the inevitability of an information technology future, but with the computer industry moving so fast, one-off support for schools is not sufficient to maintain the necessary curriculum momentum.

At present all secondary schools are receiving modems; middle and primary schools should be next. When that happens computer networks will be essential. But modems in the primary school is another story.

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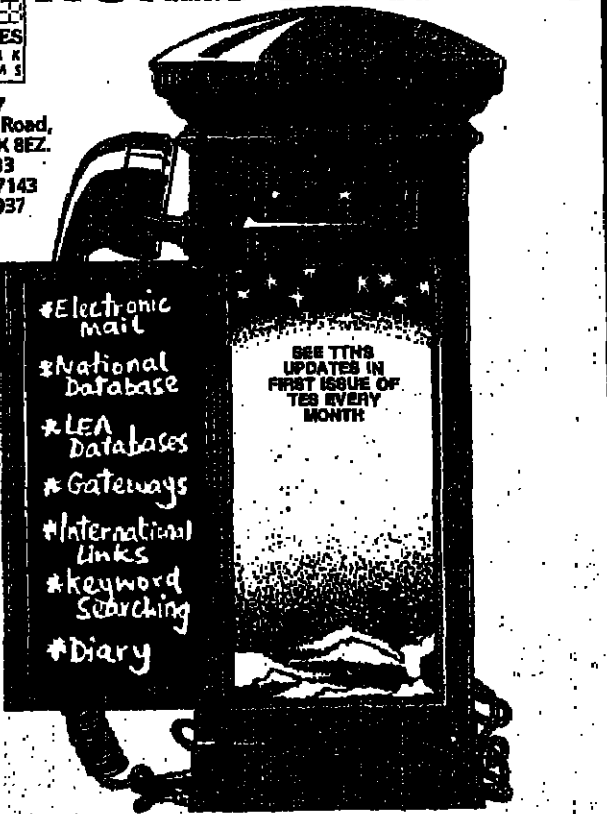
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## No ordinary students

These are no ordinary students. To incorporate them into college life has required bold planning which seems little in retrospect but is too much for many ever to contemplate.

When Richard was offered a place in the Special Needs Section (SNS) at Dudley College of Technology, the special school he had attended until he was 16 sent a report. "Richard is an enigma," it said, "and one that has not been plumbed". He is exceptionally neat and perfectly normal in appearance and behaviour (though he is designated "epileptic"). He has taken to weaving and has produced quite intricate patterns - yet his educational attainments are minimal: he cannot tell the time or recognize all the money denominations.

There are many more enigmas like Richard, whose very severe learning difficulties are not readily apparent. Brenda comes to mind; attractive in appearance, stylishly dressed, popular with her peers, cooperative with her teachers, "very capable in all domestic skills" - yet unable to write her name or recognize a single printed character.

Though Down's Syndrome students often have a characteristic appearance, they differ from each other very considerably. Maggie is good at games, reads quite well, extrovert, assertive, constantly demanding attention. Sylvia is immaculate in hygiene and dress, exceedingly timid, lacking fine motor control, ever anxious to please but without much to show by way of educational attainments.

There is considerable variance among the population received by the Special Needs Section, though all bear a common label denoting "learning difficulties".

Most students in the special needs department are being prepared for work experience, for which they require skills involved in independent travel. At an early stage they have to learn sight vocabulary such as 25 "college words". A system has been created which provides the first-year students with extensive practice in this vocabulary. The college words, in addition to being taught vigorously by ingenious classroom methods, are also presented in computer programs.

The format of these programs varies, but they all incorporate some elements of a game and, for this reason, have a high intrinsic motivation. They sustain interest and lengthy concentration span. The students frequently select them even when they have freedom of choice within a whole range of college programs.

The computer presentations complement oral discussions, field visits and sessions with the college photo-

PAUL WIDLAK

graphic section, during which the students take and develop their own pictures. These become a most valuable resource. The college words are represented by photographs of labels on classrooms, dining halls, photographic darkrooms, the enquiry office, toilets: the number of different typefaces is surprising, and a reminder of the complexity of the task of decoding print for these students.

Research papers frequently report comparisons between computer assisted learning and "normal" classroom methods of teaching subject matter. Our approach starts from the assumption that computer presentations will be integral and complementary to the resourceful teaching which is (of necessity) the stock-in-trade of those who work in special needs departments.

The hardware consists of 32K and 64K BBC micros, four in standalone and 16 connected in Econet stations, the latter enhanced by a second processor and incorporating a printer for hard copy and facilities for saving the students' work on disc. The full-colour vides are by Microvitec, who have also provided a touch-sensitive screen and light pen. Concept Keyboards provide another alternative form of input and encourage teachers with no previous computer experience to create overlays. For example, as part of lessons in home economics.

The *Electronic Display Board* has proved useful in several ways. This is in the form of a poster, divided into small squares, each one of which will accept a textual message when the user selects edit mode on the accompanying disc; the poster responds to the touch when in run mode; emits a signal and reproduces the message on the computer screen. This is proving particularly useful for bringing the group together for an oral discussion which also includes some kinesthetic training.

Through *Keyword* (Speech/ Superior Software) the student has to copy a college word from a large-type list provided. As soon as he has correctly typed it and pressed RETURN, a voice synthesizer reproduces it. In another version, a cassette recorder is linked to a Concept Keyboard to overcome the learning difficulties of those who cannot read the word in its printed form. Instructions, prompts and reinforcement are given in both verbal and visual form, and a score is provided at the end of the program.

Some software has been bought but initially the students' work from a disc comprising 55 educational games which have been collected at the college

by David King. These explicit adventure-game formats but neither the content nor the intent is trivial.

The *Clever* (Bluefile, MEF) offers numerous levels of difficulty. The college words are displayed at the top of the screen, where the main displays a series of boxes identical to the number of letters in the correct choice - and only the latter are accepted, so there is no opportunity to practise errors. The boxes reproduce the shapes of ascenders and descenders, providing an opportunity to direct the player's attention to relevant search skills.

*Wordwise* or *Wordwise Plus* word-processing clips (Computer Concepts) are incorporated into the Econet machines and some of the students who are new to word processing are beginning to want to explore its possibilities. They especially like the way their script can be saved and added, abandoned and reclaimed, printed in all sorts of shapes and sizes.

Five principles have been considered important as we have examined the possibilities of "embedded" computer assisted learning. We feel that every effort should be made to link the computer programs to the students' assist this process and not isolate them. The Econet system has potential for Group as well as individual learning.

The computer materials should complement other methods of investigation which are educationally sound, and not supplant them. So there should be a strong emphasis on oral and group work before, during and after the CAL.

Passivity should be avoided. Numerous programs and word-processor packages offer facilities with different levels of demand on the student. Some provide an opportunity to pose probing questions and structure work in a creative way, even for pupils with minimum educational attainment.

It is not sufficient merely to provide reinforcement within the computer programs - both the teacher and the peer group also have to be involved. And as with all forms of instruction, the key issue is to ensure that there is transfer of skills from one situation to another. However, the first essential with these students is to ensure that they acquire new skills and the confidence to transfer them. There can be no doubt about the value of computer assistance to this process - if it is skilfully and determinedly organized, within a sound pedagogic framework.

Electronic Display Board, Central Production Unit, Scale House, Holloway Circus, Birmingham.

EXTRA

## Brush down

Computer software in the art room - Peter Scrimshaw on its potential and Mark Sealey on two of the latest programs



**Paintspa**  
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**PC Paintbrush**  
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Research Machines Ltd, Mill Street, Oxford OX2 0BW.

As the Nimbus computer grows in popularity and use in all sections of education, programs that exploit its speed and large memory are welcome. *Paintbrush* and *Paintspa* are CAD (computer assisted design or drawing) programs that really do take full advantage of 16-bit technology and use a Mouse to achieve their effects. Each allows sophisticated and versatile mixtures of graphics and text to be built up on the screen in an almost infinite variety of colours. At any time what you have done can be changed, re-touched, scaled, moved around, copied, saved to or loaded from disc and printed out. The speed and ease with which this is achieved is a delight. I have used both *Paintspa* and *Paint-*

Peter Scrimshaw is lecturer in education at the Open University.

brush with pupils from infant age to FE and noted how the sophistication of each program usually helps pupils' styles to merge - something that does not necessarily happen with all CAD packages.

Both need a Mouse (*Paintspa* can be used without but is then painfully slow). *Paintspa* uses words (eg Draw or Polygon) to select the function whereas *Paintbrush* uses icons and windows. These are small pictures, for instance, of a rubber, brush or a pair of scissors; it has a marvellous array of text styles with almost every variation in size, font and script that most users could want. I just wish a facility for designing your own also existed to enable pupils to see how it's done. Each can be almost instantly reloaded. So the title of a book cover in "Old English", say, can be made to reappear underlined, in italic, "roman" or whatever you want. A "roman" or whatever you want. A "roman" or whatever you want.

Sections of text or image can be dragged independently around the screen to ensure perfect positioning. *Paintbrush* also has different types of rubber to distinguish between foreground and background. There is an ellipse facility as well as lines and brushes of various sorts. Printing (which it is claimed can be in sizes from 1 inch

square to 2 feet by 300 feet!) really is stopped by pressing the Escape key: an important feature. Furthermore, by using the Frieze utility program that comes with *Paintbrush*, such things as the way that colours on the screen are represented by shades of grey on a black-and-white printer can be changed to suit the user.

*Paintspa* has on-screen written help if needed, and one fewer polygon than *Paintbrush* and yet has more colours simultaneously available. It offers less flexibility in matters of brush thickness yet it has a stipple which *Paintbrush* lacks. *Paintspa* - once loaded - only needs reference to the disc to retrieve or save work: space is thus at least of a premium than with *Paintbrush* if you use PC1 and store work in progress on the program disc. Both programs allow use with two drives and changed discs, though. *Paintspa* allows one screen to be loaded back in on top of the current one - like overlaying overhead projector sheets. For younger users it is probably better to have the entire screen on display rather than to have to scroll it in from behind the menus as with *Paintbrush*.

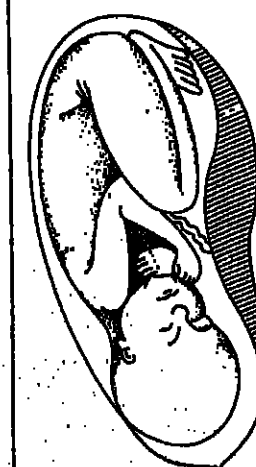
Both have the excellent feature of being able to zoom in on an area, enlarge it to fill the screen and etch away at intricate details before incorporating them back into the whole or rejecting them. *Paintbrush* shows the effect simultaneously in a corner inset.

If you want to produce, say, book covers, posters or notices with appealing lettering, *Paintbrush* with its easy to use pull-down menus is for you. If the emphasis is graphics without the need for some 16 different styles of lettering then *Paintspa* is better.

Because of its flexibility, especially with text, hard-copy and shrinking, rotating and tilting all or parts of your work, *Paintbrush* has the edge. I doubt whether pupils of any age or ability will ever exhaust the potential of either package. Both are very strongly recommended.

Mark Sealey teaches at Lark Hall Junior School in London.

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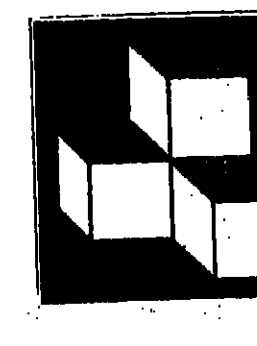
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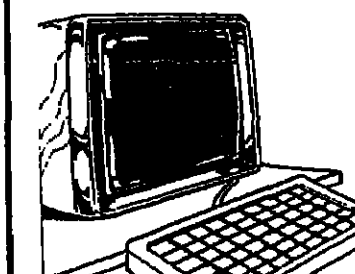
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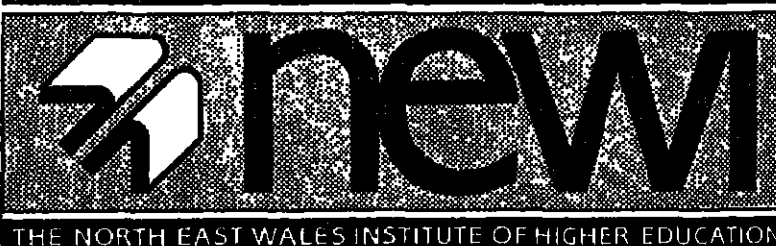
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EXTRA

Where are we with programming languages?

SQUARE

REPEAT 4 SIDE

FORWARD 100  
RIGHT 90

## Boxed in

MIKE THORNE

Use of a programming language can enable a different set of classroom activities from use of a computer assisted learning (CAL) package. By now, many people are familiar with Seymour Papert's idea of employing LOGO to encourage children to use a programming metaphor in all of their problem-solving work – not just while programming. But, in practice, Logo activities in schools have boiled down to work with DART and Control Logo. PROLOG has become history, the BASIC versus COMAL fight finished before it began, and SMALLTALK – much vaunted in almost every book on CAL – cannot be seen as a panacea. And there are signs already that the languages which control spreadsheet programs are likely to be extremely popular in several GCSE subject classrooms. So, where are we with programming languages in schools and where is the research going?

BBC Basic was produced as a poor relation to Comal, the language famous for its official (if not practical) adoption by all Danish schools (where, according to a group of teachers I met in Copenhagen, Logo and even Prolog are becoming increasingly popular). Apart from use in computer studies classes and software development (the latter being the reason for Research Machine's recent adoption of BBC Basic), all versions of Basic seem now to have been relegated to control applications. While this work is undeniably successful, using modified Basic to do it is rather like using a 40-tonne truck for a 2km journey between home and school everyday. Isn't there a better vehicle?

With the notable exception of some history teachers and a small band of followers based in Manchester, Prolog has been abandoned by UK educators at a time when its international popularity is on the increase. Richard Ennals' pioneering work showed the database aspects of the language to be teachable and learnable (it is these facilities which the historians like), but it did not address the use of Prolog's more general programming facilities.

Accounts of its possible role in problem solving are unconvincing even at the subtle level: Colton's book, *Start Problem Solving With Prolog* (Addison Wesley, 1985), for example, leaves one with the impression that if you could do it in Prolog, you could have solved the problem anyway. However, Prolog may have led us on to expert systems-related activities in schools more quickly than might otherwise have been the case, and it may even have a role to play in that direction, especially if and when the much-rumoured MSC initiative on Artificial Intelligence Applications To Tutoring happens.

Without surveying every school, the predominant impression seems to be that Logo in the majority of schools has become equated with Dart's turtle graphics and/or the use of Control Logo in conjunction with interface boxes such as Deltroble's *Control-IT*. While the use of Dart reflects an insecurity with Logo's list processing and other "advanced" features, the use of Control Logo has signalled an exciting broadening of the Logo vision.

At the forefront of these developments has been Patrick Drawett, whose recent book, *Logo: The Robotix Challenge*, has shown the school-based use of the language to be a success. Milton Bradley Robotix kit is a success

build-your-own-weird-sci-fi-machines-and-monsters kit, in some ways related to Lego – to construct moving objects and then use Logo to program their actions.

The booklet details children's responses to teachers' challenges, such as "make a machine that will move over snow" and "build a machine that would be useful to a farmer". But the most exciting aspects of the work are not these fairly obviously Science 5-13-related activities. Rather, it is the accompanying imaginative written work which the Robotix shapes stimulate. Scenarios formed from imaginative play with currently popular children's toys like transformers and Darth Vader and his merry persons can now be personified in the Robotix work as essays, poetry and pictures.

Milton Bradley are understandably excited about the apparent success of Drawett's work. At the Earl's Court toy fair recently a seven foot high Robotix model greeted visitors to their stand when they put a foot on the controlling pressure-sensitive mat. And an international dimension has emerged: the French would like a translation of *Robotix Challenges*.

Researchers at the Massachusetts Institute of Technology in Boston (MIT), where Logo was developed, are currently working on a successor called BOXER. In Boxer, commands are grouped by drawing boxes round them. Thus, if the commands

FORWARD 100  
RIGHT 90  
TO SQUARE  
REPEAT 4 SIDE  
END

TO SIDE  
FORWARD 100  
RIGHT 90  
END

would therefore be as illustrated above. One of the fundamental concepts behind Boxer is to make everything to do with a program's structure visible – or in MIT terminology, concrete and spatially-accessible. Boxes can also define environments so that, for example, doing things in a certain box might affect turtle number one and in another box turtle two is affected.

Logo programs have to be entered using a program editor and the same is true with Boxer. But another fundamental idea behind Boxer is that a complete repertoire of text editing capabilities will be available to the user during any interaction with the system. Since it is often the case that one wants to use a particular series of editing commands repeatedly, the text editor will be re-programmable and will itself be written in Boxer. Similarly, any part of the Boxer system could be personalized in this way.

Three of us at University College, Cardiff – Andrew Jones, Michael Treadaway and myself – have begun a project to examine the potential of Smalltalk in a variety of educational applications. This work was motivated by the unconvincing written reports and still less inspiring videos that have come from Xerox: the inventors

of Smalltalk. One of these videos showed some children working with an admittedly realistic-looking train as an aid to learning that distance = speed × time.

Their excited cries took the form of "Oh look, one two zero odometer means 12mph is right" and left one with a feeling of technological overkill who wants computerized Fletcher notes?

It is so difficult to program in Smalltalk that it's hard to see how any teacher could ever contemplate investing the necessary time and energy to learn it. It would take at least 18 months for a person who is already quite a competent programmer and even longer for anyone else. However, there are various packages which sit on top of the raw Smalltalk and attempt to make the language more readily approachable. Much of the widely-reported Smalltalk activity in the USA worked through such a package as an earlier, conceptually simpler version of Smalltalk, and children who have themselves programmed in Smalltalk have almost certainly worked in this way.

For example, with the *Programming by Rehearsal* package, teachers have access to a set of actors (in reality cartoon characters and objects displayed in a menu at the side of the screen), which can be put through pages (by selecting ready-made activities from a menu or by modifying the definitions of one of them). The emphasis is on programming visually: only bits which can be seen can be manipulated. Yet the metaphor is strong enough to support a full-powered programming language.

If a teacher wants to design a piece of educational software (a production), using the *Rehearsal World*, the steps involved are:

- Auditioning the available performers to find out what they can do.
- Thus, if the "production" involved getting the pupil to write stories using pictures, the teacher might choose a text performer and a picture performer.
- Taking a copy of the chosen performers and placing them on the stage.
- Re-sizing and moving the performers so that they are of the desired size and in the desired place.
- Rehearsing the production by choosing each performer the actions to be taken in response both to pupil cues and cues from other performers.
- Storing the production away for later retrieval.

*Rehearsal World* isn't widely available in the US or the UK, but a related product, *Actors*, has recently gone on sale in the US for IBM PCs and compatibles. It uses Microsoft's Windows system to provide a programming language in the style of Smalltalk and *Rehearsal World*, but with more of a PASCAL flavour.

While the ideas embedded in these new programming environments may not provide teachers with immediate hope for new classroom tools, it may be that small parts of them can be put to good use. The Smalltalk philosophy of modifying existing programs rather than writing new ones seems to have a lot to recommend it. At least in the UK – until more funding is available to encourage both the necessary research and the even more costly development.

Mike Thorne is a lecturer in computing at University College, Cardiff.

Judith went to Art School after learning professional design on the Nimbus; now she's using IBM\* 3D design software on an even more powerful Nimbus.

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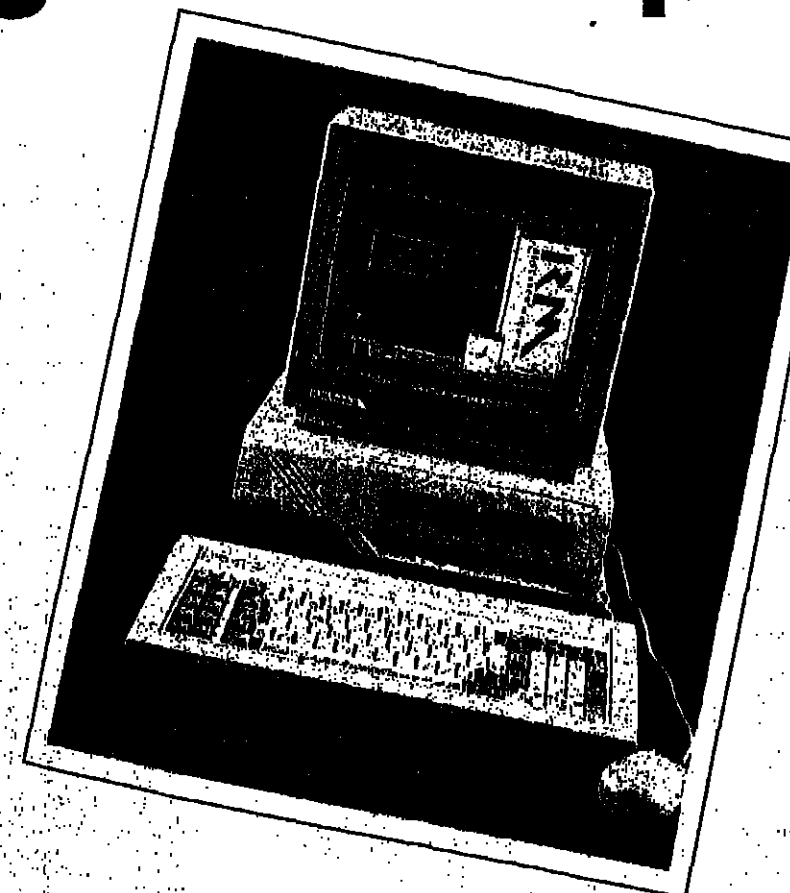
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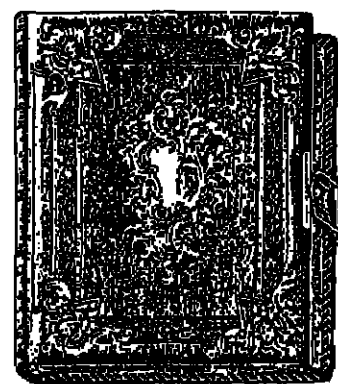




EXTRA

John Thornhill reviews a range of books to help teachers prepare for the new examination

## GCSE: A closed book?



September 1986 saw the dawn of a new era in the annual round of examination fever. GCSE, heralded by statements about the provision of curricula suited to the needs of pupils in the modern technological world, became a reality for teachers and schools. The national ideals expressed in both general and subject specific criteria forewarned teachers that a new philosophy was to be expounded which would pre-suppose new teaching strategies. These expressed intentions were no less real for teachers of computer studies.

As a GCSE chief examiner I am concerned about the development of computing across the curriculum and the place and teaching of GCSE computer studies. There are many problems. Even in the enlightened late 1980's, the DES, inspectorate and publishers still classify computing under mathematics. Few institutions provide postgraduate training in computing as a discipline separate and distinct from mathematics. The historical development of computer studies has created a computer teaching force whose prime training was in mathematics. Existing syllabuses, although updated, have become stilted.

In such an atmosphere it would be difficult to expect an immediate revolution in the field of computing and its teaching. But that is what the GCSE examination expects.

National criteria for computer studies require teachers to appreciate that "the widespread use of computers and microprocessors in the home, at work and in school makes it appropriate for schools to offer pupils computer studies, which should be a systematic introduction to computers, what they do and how they may be used in various contexts."

In some respects this is a tall order for teachers. Their experiences of "computers, what they do and how they may be used in various contexts" must of necessity be limited. Teachers have a right to expect that those who have responsibility for in-service training will provide them with guidance and opportunities to broaden their

knowledge of the developing world of computers. To integrate this subject fully into the changing curriculum, teachers need to appreciate other aspects of the national criteria document.

"Computer studies is concerned with pupils learning and applying the principles and skills of problem solving in a computing context." Have we, as teachers of this subject, evolved classroom practice that has enabled our pupils to develop this aspect of their learning? I suspect that many teachers have taught computer studies in a traditional didactic manner using the basic inductive approach. How many lessons have begun with such phrases as "we are going to examine the use of key fields in file handling." There often follows an explanation and exposition of the term key field, what it is and why it is used. But this approach does not satisfy the GCSE criteria; such topics must be presented by a problem-solving approach.

For example, give pupils a file segment listing names and information about a group of employees such as: Smith A F 23 Workshop Smith A F 45 Typing Smith A F 32 Canteen Smith A M 43 Packing

If pupils are asked to examine the list and provide information about Smith A, they will appreciate that a problem exists. The pupils themselves can be involved in finding and creating the solution to that problem. Pupils, especially at the lower end of the ability spectrum, may more readily remember the need for a key field if they have been involved in the problem and its solution. This is the deductive method of teaching which allows pupils the opportunity to increase their knowledge by experimentation.

GCSE computer studies needs a new and enlightened approach to the strategies used in the classroom. If we are to fulfil not only the philosophy of GCSE but also its practical implementation, then classroom practice must allow pupils a greater individual involvement. This was certainly the intention of the national criteria.

The pupils should then acquire the skills by applying these principles to real situations with which they are familiar, particularly those found in a school context. Therefore, many of the principles of computer studies are best developed by a practical approach. It is intended that the national criteria will be consistent with good practice in the classroom.



In an attempt to exemplify these criteria, the Secondary Examinations Council in conjunction with the Open University has produced a *GCSE Guide for Teachers*. This document is full in its explanation of GCSE computer studies, examinations, coursework and differentiation. It makes some attempt to attack the problems involved in the teaching of the subject. The overall design of the booklet has much to commend it. It uses a number of practical activities designed to focus the reader's attention on methodology and on the problems posed by new courses and approaches. The early Activities encourage teachers to identify the differences between the existing CSE and O level courses. The difference, it suggests, is not in the content of syllabus but in the emphasis of the national criteria.

The Open University guide attempts to provide some advice about teaching strategies by suggesting a list of practical activities which teachers could employ in the classroom. Activities, such as those suggested by the guide, should be the pivot for all topic instruction; pupils should be encouraged to experience a range of software; the problem-solving approach should underpin good classroom practice.

A classroom teacher's main support is a text book or books. A number of computer studies text books are currently available and four or five currently support GCSE.

Many text books used in schools for pre-GCSE courses have background information but not the depth of treatment to act as a class text. Most of them treat the subject in a scientific manner, but do not integrate an examination of the widespread use of computers in society. They have separate chapters on the use of computers and their impact. It is preferable to spread exemplification of applications throughout the book.

The new GCSE philosophy expects this type of treatment. So what of the new GCSE books? Many are suitable as resource material for information and should find a place on the resource shelf of computer studies teachers.

*Computers and Communication* by Steele and Wellington (Blackie, 1985) is an attractive book with short paragraphs followed by a number of questions. Most chapters contain a summary under the heading Key Points. There are word searches and some reading passages. However, the treatment of most topics, although accompanied by good diagrams, is either superficial or unsuitable to the problem-solving approach. It would not really tax pupils at the top end of the ability range.

Peter Bishop's revised *Comprehensive Computer Studies* (Edward Arnold, 1985) with its descriptive style is full in its contents. There are many pictures and diagrams and each chapter has a useful summary and questions. However, it is not suited to a

structured approach in the classroom and would be difficult to use with a strategy based on problem-solving activities. With pupils at the lower end of the ability range much added explanation would be needed of many topics.

Peter Avis's *Practical Computer Studies* (Cassell, 1983) has an interesting style with many diagrams positively supporting the text. In many respects it is easy to read. Each chapter is broken up into a series of short explanations preceded by a stimulating question, and contains a number of specific tasks, though I have doubts about low-ability pupils being able to "use computer programs to print out the logic tables for the following circuits."

Any examples given are subsequent to explanations. It would have been more constructive to have worked from the examples and the problems inherent in them to the definitions of terms. This would have helped teachers to create a classroom environment suited to GCSE. A further drawback is that the contents are spread across two books - not a good principle in the current financial situation. To balance this the books are supported by software that can be used to provide some of the practical exercises required by GCSE.

The back cover of *Computer Studies for You* by Stephen Doyle (Hutchinson, 1985) claims that it "brings a lively approach to the core material required for 16-plus courses.... Activities sections encourage application of knowledge."

The book has an appealing layout with many diagrams which adequately enhance the text. Each chapter has a Test Yourself activity at the end, requiring the insertion of a given keyword in sentences. A very suitable exercise for less able pupils. There are also a number of Things to Do at the end of each chapter. These are mainly examination questions from previous papers. There is a chapter on revision and preparation for the examination and course work, with some very helpful suggestions. Although the book is full, one has to question the book's coverage of syllabus since it does not include such crucial terms as algorithm or spreadsheet even in the index.

The first book claiming to be published for GCSE is *Computer Studies for GCSE* by Mark Bindley (Blackwell, 1985). It is full and well presented, though disappointing in many respects. The style of the contents list reflects earlier books such as Bishop's *Comprehensive Computer Studies*. The style of the text is not unlike that used in the Bishop A level text, *Computing Science* - dry and hard work. Explanations of computer terminology are given generally without reference to specific applications or detailed examples.

As with many of its predecessors, the clinical treatment makes it difficult to use this book with the new

approach. The chapters are broken up by exercises which are familiar in style and format and many are questions from previous examination papers. The introduction suggests that there are role-play exercises, though I saw little evidence of this style of activity in the classroom for many aspects of the GCSE syllabus such as the effects of computers on society, the relationship of man and computer.

*Computer Studies for GCSE* by Noel Kalicharan (CUP, 1987) is promised for October or November this year. From the sample material I feel that it will not replace any of the current texts. The contents appear to be full but the text appears to be long and without the large number of diagrams required for the full ability range. It might be suitable for upper ability O or A level. The end of chapter exercises are not within the philosophy of GCSE. They are not graded, and most are without structure.

This is a somewhat depressing picture. There is a need for a text which will incorporate the problem-solving approach, the integration of applications and implications within the body of the text. It would also need to have structured activities and a wide variety of ideas suitable to the whole ability range.

As an examiner, I also considered a number of questions from available specimen papers. It was clear that a number of the questions could not be answered if the above books had been used. The Doyle book did not support a number of technical terms such as "rogue value", "interactive mode", "trace program" - all terms found in the examination syllabus and papers. Although Bindley is fuller in definitions, many candidates using his book would have difficulty in applying the principles of computing to specific applications. None of the books would adequately prepare candidates for some of the specimen questions on documentation or file security.

Computer studies has to change to fall in line with the up-to-date GCSE syllabus. The philosophy is now suited to the whole ability range from below GCSE to A level. Specimens questions do allow pupils to show what they know and do require new teaching strategies. A lot can be learnt from the approach expected from many of the information technology syllabuses.

As an examiner, I am concerned that many candidates may not be prepared for the new style of examination and that current resources do not fully support those teachers who are attempting to devise the classroom practice that GCSE expects. Those who have the power should be ensuring that teachers of this all-important aspect of education are supported by financial and practical assistance.

John Thornhill is the Northern Island Chief Examiner for the new GCSE Computer Studies. He is a member of the GCSE Computer Studies Group.

Interactive video - a survey of the field and a review of some samples

## Double vision

DIANA FREEMAN

Surveying the interactive video scene is like trying to catch a moving vehicle. The only one that has stopped long enough for anyone to get on is the Domesday "Rolls Royce" from the BBC's Domesday Project: elegant, well packaged, but according to recent articles, not for the mass audience in schools. The IVIS bus appears in the distance, eight discs from the Interactive Video in Schools Project. It has spaces on board, and a number of destination signs on the front. Flashy sports models meant for the home market speed past, but crash before they turn the corner.

There are three views of this scene: the hardware, the software, and the educational viewpoint. As this is a technology-led scene, concentration tends to be on the hardware followed by the software, which leaves the educational view last. The IVIS project is redressing the balance with a 90-school evaluation exercise, and flexibility in the choice of hardware to support the project (see the article in *The TES* January 23, 1987).

Interactive video is a mixture of traditional video programmes and computer software. Moving or still images are under the control of the child to explore a vicarious situation, develop an idea or concept or extract information. The educational aims are still similar to those identified 10 years ago by the national development project in computer assisted learning. It is the delivery system that has changed, not only in the form of the images but in the level of interactivity.

At the simplest level, there are a number of active play discs available to teachers and children. These are those that have not been intended for educational use, but which have educational potential and can be played on low-cost domestic laserdisc players. They are based on documentary programmes and range from the ubiquitous *British Garden Birds* disc (BBC) which has sequences of common birds in their natural habitat, to those which have good quality still images from art galleries or museums. These discs come with dual soundtrack and can be accessed by a remote control keypad in the same way as a videocassette.

The advantages of laserdisc technology mean that still frame can be displayed without distortion and retrieved in seconds. This is fine if all you want to do is run through a few sequences at a speed you select from the disc, but there are 54,000 frames on a disc, so it could get complicated.

The next stage is to superimpose a framework on the discs that is activated by computer software. There are two ways of doing this at the moment. One is to use an authoring language, such as *Microtext*, to direct the user to certain frames, or to use data-handling software, such as *Quest*64, (from the Advisory Unit, Hatfield), to create a field for picture retrieval.

When computer control is required the technology starts to become more complicated. There are now two images, one generated by the computer software, and the other a television picture from the laserdisc. If you want to view on separate screens, then one wire from the user port on the micro to the remote control socket on the player will suffice, but most people are content with this, so we get into the realm of higher technology.

The separate signals from the laserdisc and the computer have to interact so that each screen is showing the correct image. The low-cost option is to build this into yourself, but you need to be handy with a soldering iron. The minimum requirements are a laserdisc player (the simplest one you can find for computer control), a BBC Master or a similar board, disc drives, a video monitor (the Wilco, the two available (Philips, Sony or Microvitec),



video control ROM and the cabling. If you don't feel like doing it yourself, then consult *The Soft Option* (Hampton Wick, Surrey).

With this hardware it is now possible to make your own way through a laserdisc, set up the pattern of what you want displayed, overlay text and arrange the images to appear in the order you require. In a teaching situation, it can be used in a demonstration mode to explore the purpose, but probably the most interesting use is for the children to set up the data files or create the *Microtext* screens themselves.

The next stage begins here with images that are created by educationists, with overlays written in an authoring language that have been trialled by teachers and children. The IVIS project is providing such a resource with trialling and piloting taking place this year. New authoring software is being written for this project. The aim is to create eight discs that teachers and children may adapt, that will run on a variety of laser hardware and on the BBC Acorn and RM Nimbus systems.

Other analogue laserdiscs are in the offing, which are designed for a particular educational purpose. The educational publishers John Wiley have an *Interactive Science Laboratory* Disc which enables sixth formers to carry out four experiments on chromatography, distillation, electrolysis and circuits. The experiments take place in real time, there is the opportunity to alter variables, make notes on the computer notepad, and consult an enquiry desk for advice. This disc runs on similar hardware to the IVIS materials.

One or two other educational publishers are hovering on the brink of laser disc production. For instance, Oxford University Press have a *Voice* disc for interactive preparation, but the experiences of educational software publishing have limited the number plunging into this technology.

What do the top-range Domesday laserdisc players have to offer schools? They have the ability to retrieve not only analogue information (television pictures), but digital information recorded onto the sound tracks of a disc. The Domesday Discs store census data for display and mapping by the software, also held on the disc (or on floppy disc in the case of the RM Nimbus system). The exciting aspects of this technology are an instant access of the image through the "mirror on a laser" trick and the ability to extract the digital data through third-party software. It will be interesting to see what developments are forthcoming in this area when children start to interact with their own data and the Domesday Discs.

The BBC *Ecology* disc, soon to be released, also offers a level of interactivity that relies on the Domesday player. It enables children to take part in fieldwork, carry out experiments and analyse results by putting them in a situation where they use this experience to help them manage a changing habitat.

Laserdiscs offer a level of interactivity with powerful images in children's hands. It is up to the teachers to decide on the level they feel is most suited to their teaching. In the next year the technology is bound to move on and hopefully reduce in price, but will provide similar development in educational software to add to the small pool of discs already here and in preparation?

There seem to be two ways to go: either to target on a small audience, as the BBC *Ecology* disc or the John Wiley *Science Laboratory* has done, or to offer a wider scope of these offer depth of learning in one discipline; or to offer a wider scope with compendium or theme discs and a variety of methods of interacting with them through accompanying software, authoring languages or third party software. Both these methods offer exciting prospects.

Diana Freeman works at the Microcomputing in Education Unit in Hatfield.

EXTRA

## JACQUETTA MEGARRY

Interactive Software Samples  
Three discs for BBC B and Master (40-track and 80-track single-sided, 80-track double-sided)  
BBC Education, Villiers House, The Broadway, London W5 2PA.

In February, BBC Education posted a wallet containing three sample discs and a catalogue to computing information technology advisers in local education authorities up and down the country. As the covering letter explains, publishers tend not to offer inspection copies because of copyright and cost problems. A free sample pack seems attractive; further packs cost only £5 and you are allowed to copy the discs. The letter is pleasant and the discs are labelled. I had no suspicion that they were about to cost me hours of frustration simply to get them to work.

On the first attempt (Master) no disc worked and only one even gave a message: "Illegal address at line 40". Examining line 40 suggested that the problem was to do with the sideways

RAM; my machine is set to allow use of all three ROM slots on the mother board - an official, if not common-place, arrangement. On the second try (BBC B), only one disc booted as intended, the other two both sulked, saying "Syntax error line 10". When I listed this, it swore at me; well, actually what it said is reproduced below.

Ignoring the rest, I tried CHAIN "TITLE" and all was well. I conclude that the disc is intended for those with Basic 2, ie more recent systems; but there are lots of Basic 1 machines in education and the letter mentions neither the restriction nor the simple fix. And it would have taken only rudimentary programming skill to make the disc cater for both versions.

The irony is that there's some very good software in there. Unlike some demonstration discs, these let you interact with them instead of just looking at pretty pictures, and the screen instructions are adequate to give you a feel for the packages. But the point had been rather lost in the struggle to get to first base: connecting, rearranging and keeping track of disc drives, both 40-track and 80-track, single and double-sided, in combina-

tion with both Model B and Master; trying back-up equipment because I couldn't believe my eyes; unplugging ROMs, disabling RAM boards and trying ADFS "just in case"; it all takes time, and time was running out.

This story will be all too familiar to those who labour at the sharp end of educational computing. Why is it worth publishing? Because this software was produced by the BBC, which was involved with the BBC Micro from the start - if they can't cope, who can?; because it was presumably intended to attract and reward, rather than frustrate and annoy, the user; because not everyone happens to have all combinations of micro and disc drive to hand, or can recognize symptom and cure, or is motivated enough to persist when things don't work first time.

Remember that we're not talking about a new system. Pioneers expect to put up with this sort of thing; when my BBC Micro was the first in Glasgow, I had to research and solder my own connecting lead. But that was six years ago - a very long time in computing terms. Why isn't it long enough for the BBC to make software work on its own computers?

>IOFINKEY(-256)=253\*FX255,0,247;"SRWRITE"+STR\$~TOP+"+500 8000 4";?&A5=&C2:CALL-4ELSE"FX255,8,247:CHAIN"TITLE"



On the 23rd February Phase One of this database service dedicated to curriculum materials and information was opened. At its launch the Minister of State for Industry and Information Technology Mr Geoffrey Pattis described it as a "flexible, growing service that is designed to fill a need in education."

## WHAT IS THE PURPOSE OF NERIS?

The need for a national database capable of drawing together information about teaching and learning materials scattered around the country has long been recognised by teachers and curriculum development agencies alike. Changes in teaching methods, course content at all levels and the revision of the examination system have made it appropriate to think in terms of a curriculum database with the potential to help teachers by providing them with the means to

- search a multitude of sources using one system,
- share experiences and expertise in relation to curriculum development and the use of learning materials,

- obtain electronically, up-to-date and relevant teacher and pupil materials which can be downloaded directly into schools.

Design work on NERIS commenced in March 1986 with the aim of producing such a database. The development work is being funded initially by the Industry/Education Unit of the DTI and has the support of the DES.

## WHO IS CREATING NERIS?

The design team has been drawn from LEAs where they have been working successfully in the areas of curriculum development, in-service training or IT. In addition to computer consultants appointed to NERIS there is close co-operation with computer experts at the Open University and elsewhere.

## WHAT WILL NERIS PROVIDE?

The database can hold learning materials in their entirety and can make these available for downloading directly to schools. These materials might include worksheets, teacher notes, pupil assignments, data sheets, case studies, reviews, abstracts etc. In addition to text it is planned to include graphics and audio data.

Where materials are located outside the database bibliographic and other educational information will be provided together with comments by teachers on their practical use where this is available. In addition to references to various learning media the database will contain information about

people, places and other databases. This will enable teachers to identify curriculum development projects and contracts with expertise and advice.

## WHO IS PROVIDING THE DATA?

A national network of information providers is being developed that includes teachers and curriculum development groups, LEA resource and curriculum centres, professional associations, curriculum development agencies, educational publishers and other commercial organisations.

Initial reactions both from the education and commercial world have been overwhelming and over 130 information providers have already been accepted. Examples of datafiles being prepared or in the process of being included are,

- SCDC Teachers' Fund of curriculum development activities.

- OVERTURE database of industry related teaching materials for maths and science. These include material designed by teachers specifically for GCSE courses.

- BBC Education & TV Schools files containing program data and teacher notes.

- MRC database of TRIST materials and activities.

- FEU Courseware reviews.

- Special Education file of software reviews.

- Primary Science datafiles.

- Materials produced for use in a consortium of LEAs in E. Yorkshire and Humberside by RESOURCE.

- the educational catalogues of Industrial concerns like BP and the Electricity Council.

## OUTLINE NERIS RECORD STRUCTURE

(Part 1) BIBLIOGRAPHIC INFORMATION - Title, Media, Author, Series, Publisher and Publication Date.  
(Part 2) CONTENT INFORMATION - Aims and objectives, content, skills and concepts, assumed understanding, equipment requirements etc.  
Related search terms, age phase for whom material is intended.  
(Part 3) AVAILABILITY - for loan, purchase or preview. Contact list and list information.  
(Part 4) COMMENTS - of users, reviews, case studies.  
(Part 5) ADMINISTRATIVE DATA - including File Name, ISBN and Dewey numbers, entry and up-date dates.  
(Parts 6 & 7) TEXT & EXTENSION FIELDS - containing extracts, an abstract or the full text of an item of learning material.

## ADDITIONAL INFORMATION

The data base contains information about the record structure, names of information providers and datafiles. A NERIS NEWS facility is also available together with a response frame allowing users to request

printed information which may also be obtained by writing to:

NERIS (Ref T13), Maryland College, Leighton Street, Woburn MK17 8JD.

(1548)

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by Janet Leonard

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EXTRA

Data retrieval for young children

# In search of data

Of all the software that falls within the "content-free" heading, data-retrieval packages seem to offer the widest variety of uses within education. Many of the packages are now available for school use, and they emanate from a variety of national and local centres and reflect different philosophies of computer use.

For example, *Quest*, produced by AUCBE and available nationally, is command-driven. *Locate*, produced by Leicestershire, is largely menu-driven. *Grass*, from Newman College, emphasizes the graphical display of data and, with its menu form, is very suitable for use with young children. Packages like these would seem to have uses in a wide variety of areas, with, for example, datafiles holding census information, the properties of various chemical compounds, records of observations of species, properties of mathematical shapes, local accident figures and many others.

With younger children it can be instructive for them to create their own data files, and all the packages allow this to be done. For example, a class of children in a primary school might create a data file about their families. They could work around the keyboard in twos or threes, and type in their own data. Once the file is established, it could be searched in order to answer such questions as "Which children have dogs but not brothers or sisters?" Answers could be found by simply asking the class, but the exercise of creating their own files is itself instructive and may help the children to interrogate other more extensive files, like the historical census returns for their village. The main point in such uses of data-retrieval packages is for the children to become familiar with structured data.

However, in the case of all the data-retrieval packages, this familiarization begins with the children being forced to accept a record/field format from the outset, which can be very demanding. Consider the follow-



MIKE SCHILLING, BARRIE GALPIN, ROY KIRK

ing questions and possible answers which have to be given by anyone using *Facfile*, a package designed for primary schools.

What is your file called? FAMILIES  
Each one of the items in your file is called a...  
If one FAMILY is called a FAMILY, what do you call two of them?

FAMILIES  
How many headings do you have for each FAMILY?  
What is the 1st heading? CHILDREN  
What is the 2nd heading? PETS  
What is the 1st FAMILY called?

BROWN  
What is the CHILDREN entry for the BROWN?

Before the pupils can start to enter data about their families, the class will have to agree exactly what sort of information is to be entered. The number and type of "Headings" (or fields) must be decided in advance. Unless children already have a conceptual awareness of standardized data, there is a strong chance that they will be following a laid-down procedure or a set of instructions for which they have no real understanding. So it is unlikely that skills will have been

acquired which can be applied to other situations.

An alternative approach is for the pupils to begin their data collection by writing a short paragraph about their families using one of the word processors which are designed for classroom use. Such an activity might produce different types of data, with each individual producing what to him/her are the most important pieces of information. If the word processor allows searching, it would be possible for pupils to compare their information.

For example, they might formulate and answer such questions as "Which families own a dog?" When they realize that not everyone wrote about pets, the need for standardization in the data would become apparent. At this stage it would be most useful if the data file created by the word processor could be easily re-formed, so that it could be used by a data-retrieval package.

The Spiral project, based at the School of Education, University of Leicester, and funded by the British Library Research and Development Department, has been developing software that bridges the gap between word processor and information re-

triever. Using the computer language MICRO-PROLOG and the BBC Micro, we have written a program which is being tested in a number of primary schools in Leicestershire.

After pupils have entered information in an unstructured way, the program allows the data to be split into a series of numbered items. When each pupil has provided names for each item, the computer compiles a list of the names for the whole data file. Then a standardized list (the field names) can be entered so that the data file can be automatically transformed in a standardized record/field format.

The program does not attempt to rival the power of existing word processors or information retrieval packages; instead, it attempts to provide a facility by which children might come to appreciate the need for structured data.

As well as developing and testing the software, the project is trying to evaluate the contribution it might make to pupils' learning. Teachers and others who have seen it seem to believe it is making a vital and unique contribution to the development of the pupils' information skills.

One teacher commented: "They found that some items which their search had told them were not present were, in fact, simply not recorded by some groups. They realized that if all areas presented the same kinds of information, then comparisons would be easier."

Another comment on a different aspect of the program was: "My children had no idea of writing notes. It has given them an insight into the fact that you can present information in far fewer words... It introduces us to primary schools the art of précis."

However, measuring pupils' acquisition of skill and assessing the program's value in anything other than a subjective manner is proving very difficult. The worth of a piece of software in terms of children's learning must ultimately be for the teacher to decide.

## Keeping the records straight

Database Datascribe

For BBC B, B+, Master 128; also included in Titan chip for Master 128. Mortec Computer Products, 359 Singleton Street, Swansea SA1 3QN.

Our review of the word processor *Scribe* (TES February 6) did not have room to comment upon the features of Mortec's associated *Datascribe* (also available in Titan chip for Master 128). *Datascribe* is a database management system which incorporates the spelling checker, *Scribecheck*, and a unique statistics pack called *Dataslog*. This database is accessed from the *Scribe* menu, if fitted, and operates as easily as the word processor, even for anyone unfamiliar with computers.

Creation of a database is achieved simply in the "Create" mode by the user defining titles on screen and creating fields of up to 2,048 characters. As many as 96 fields are allowed, with up to four separate screens of information for each record. There is a maximum of 4,000 records, although it is unlikely that this potential will be fully realized unless the "Master" version is used.

Information is entered in "Edit" mode, which is controlled by a menu of nine commands, most of which are concerned with searching or indexing. Finding a record is both quick and easy, using a search on a previously defined "keyfield" which, even with a full 4,000 record database, takes only three or four seconds. The database can also be searched by setting parameters (eg all surnames from A to M) or "matching" any or all of the fields.

Indexing is easy. It is possible to set up a series of sub-indices, with one or two criteria for each. Each record can also be temporarily "marked" on a special index - this is useful when viewing a set of records and putting some on one side, so to speak. Sorting records into different orders is, of course, one useful function of a database, although it isn't often necessary here, since the sub-indices and keyfield search will normally provide most of the required information: the records are automatically updated in memory in keyfield order as soon as new ones are entered.

Individual records can be printed from screen but "hard copy" is more usually obtained by means of an easily programmed "Report Writer" which, despite its sophistication, has only a few commands. Label printing, for instance, is easily obtained with its facility. Mathematical calculation of field values is also possible. "Mail Merge", integrated with *Scribe*, is available as a separate item on the menu and allows for the insertion of even the longest file, if required.

In our school, we have employed *Datascribe* to keep track of a school's general mailing and donation list of 2,300 names and addresses in 30 categories. So far it has paid for its keep by helping us raise over £30,000. The school office is now about to embark on the task of recording all the pupils' names, their addresses, subjects studied (and results) and, in the course, their fate in later life.

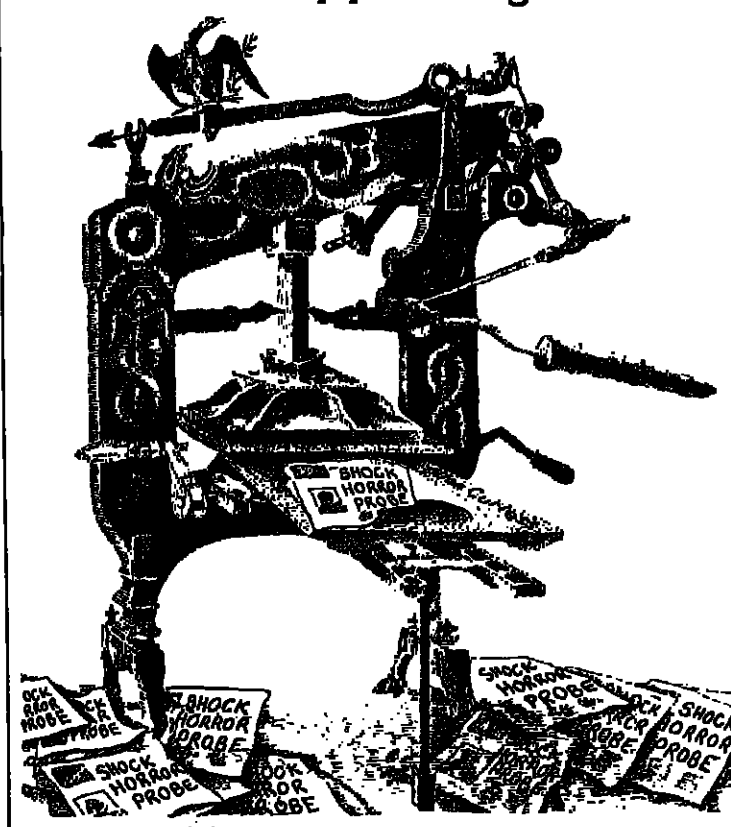
EDWARD HENDERSON  
JONATHAN HUGHES

The *NERIS* database runs on a Sperry 1100 series mainframe at the Open University in Milton Keynes, a computer it shares with its older cousin ECITS, the database of courses in higher education.

At the start of the service *NERIS* will be quite a modest database, but records are being added at great speed and by the autumn it will have become the most powerful information service about teaching materials available in Britain.

By the autumn *NERIS* will also offer "Level 1" and "Level 2" levels of searching. "Level 1" will be a simple search on the basis of keywords entered at the level of a single word or phrase. "Level 2" will be a more sophisticated search, allowing users to search on the basis of keywords entered at the level of a single word or phrase.

Desktop publishing



## Off the presses

RAY HAMMOND

Desktop publishing is the latest phrase to set the world of microcomputing alight. Following the collapse of Sinclair, Acorn and a host of other micro makers, observers might have been forgiven for thinking that the steam had gone out of the micro market. But in the last 12 months growth has returned to microcomputing with desktop publishing proving the fastest growing area. Higher education is now the second-largest user of desktop publishing and a few of the more wealthy schools have also begun to reap the benefits of the new concept.

Desktop publishing, usually called DTP, blends the power of word processing with typography and print techniques to allow the user to produce professional-quality printed materials from a microcomputer system. Thus the power of being a "publisher" arrives on any desktop where a suitable microcomputer system is present.

Apple are responsible for pioneering desktop publishing and, at the moment, they have a 60 per cent share of the market, although they are now losing market share to other computer systems.

A DTP system offers users the chance to create page layouts on a microcomputer screen, to set text in a wide variety of type-face styles and "font" and to create graphic effects. This power allows users to create professional-looking newsletters, magazines, posters, invitations, letters, etc. on the micro.

The power of DTP systems is growing all the time and professional publishers are now beginning to use low-cost DTP systems to replace the expensive process of layout, typography and

photo-composition which is currently used to produce most magazines and newspapers.

A DTP system consists of a standard microcomputer (usually 512K RAM minimum) fitted with a high-resolution screen and a Mouse. There are now many DTP or "page layout" programs available, but the best known are *PageMaker* from the Aldus Corporation (for the Apple Macintosh and IBM PC compatible machines) and *Fleet Street Editor* from Mirrosoft for the BBC Micro. These programs are like super word-processing programs with the addition of typeface choices and graphic capabilities. Prices range from around £100 to £500 depending on power and facilities.

The most expensive part of a desktop publishing system is the high-quality printer needed to produce professional-looking pages. The DTP concept only evolved after Apple produced their LaserWriter printer in 1985. This piece of equipment provides a print-out from a microcomputer which is virtually indistinguishable from professional print quality, but this machine currently costs around £5,000. Other manufacturers have started to produce laser printers and the price has already started to fall with laser printers now becoming available from around £3,000.

The good news for users who wish to produce professional-looking print without making that kind of capital investment is that it is possible to gain access to laser printers through bureau services. Most Apple dealers will take discs from customers and run off page proofs on LaserWriters at an average cost of around £5 per A4 page. The resulting prints can either be used as camera-ready artwork and given to a

printer or they can be photocopied for more immediate distribution.

One British school which has decided to invest in a DTP system is Cheltenham Boys' College.

"We've got seven Apple Macintoshes in our new IT centre at the school and we've had desktop publishing facilities for about a year," Ian Carter, head of computer studies at the college told me. "We use *PageMaker* software with an Apple LaserWriter printer and it gets very wide use."

"There are three groups of boys who are now using DTP to produce commercial magazines. One reviews programs for the Spectrum computer, one is about Amstrad computing and one is called *The Collective*, which is a school magazine. In addition a Young Enterprise group is now producing a cookbook for publication."

"We also use DTP for producing school invitations and general literature and the system is in constant use. We have an electronics company which sells kits and the boys do all the literature, price lists, invoicing and instructions using DTP and they get 5 per cent of any profits that company makes."

"I find that the quality produced by DTP is so great that it stimulates the boys to experiment with design. They see a professional job being produced and that encourages them to think about the possibilities."

Another school which is experimenting with the new application is Oakland School, an independent secondary school in Rutland.

"We've only had our LaserWriter for a couple of months, so we're still at the dabbling stage," says Rita Gunn, head of the computing department. "So far we've used desktop publishing for letterhead design, for newsletters, school publications and brochures and I think our design department will be able to make great use of it."

"We have eight Apple Macs for the students and further 10 for school administration. For desktop publishing we use *MacDraw* (Icon Technology) as our main program and both the staff and pupils are keen to use the system more. I am sure that it will prove a worthwhile investment."

For most schools the purchase of a complete desktop publishing system is still out of reach, even though Apple's educational discount bundles a Macintosh, second disc drive, software and LaserWriter together for around £2,500. The option of using bureau services for the final print-out will almost certainly prove attractive to schools who already have Apple Macintosh micros.

Other micros such as IBM PC compatibles and the BBC are capable of desktop publishing, but users will find it harder to use the application on such systems. The Macintosh is particularly suited to DTP because its bit-mapped screen allows for more graphic flexibility than even high-resolution screens supplied with other micros. Despite this, the hunger for desktop publishing facilities is such that almost any micro can now be made to undertake it in some form.

Readers who want to learn more about the concept are directed to a new book called *Desktop Publishing: The Book*, by Tim Hartnell, which is published by Interface at £6.95, and to a new monthly magazine called *Desktop Publisher*, available from The Desktop Publishing Company Ltd, 43 Hithermoor Road, Stanwell Moor, Staines TW19 6AH.

and transmitted using the communications option. Similarly, data from the spreadsheet can be presented graphically - for example as 2D or 3D bar charts - and captured as a screen dump on an Epson-style printer. The options are vast and the controlled, menu-driven world of plenty of safety-nets; unlike the original *Mini Office*, there are short-cuts that allow you to bypass the catchiness if you don't need to change the default values.

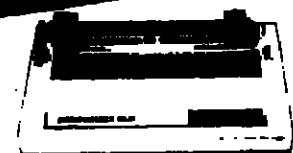
This version shows many improvements over its predecessor, not only in the software (which had only four functions before) but also in the documentation. The filmsy and cramped matchbox-sized leaflet has been replaced by a 66-page wirebound book. It would be easy to suggest further improvements such as a contents page, index and quick-reference summary, but it may be unreasonable to expect too much at this price.

For those who want faster access, more storage space or compatibility with the Macintosh, there is a ROM version at a price of £129.95. This version is also available in a ROM version at a price of £129.95.

EXTRA

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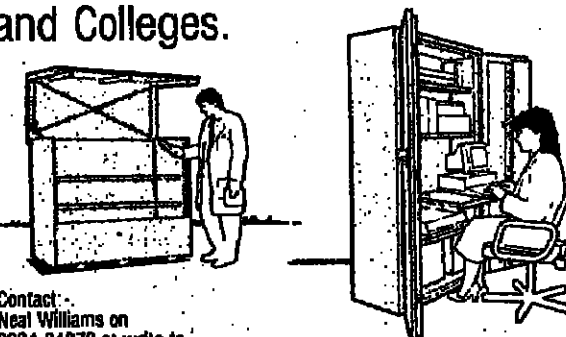
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EXTRA

## The 12 DES review documents on computers in the classroom

1986 was the year for taking stock. One of the Microelectronics Education Programme's last activities was concerned with sponsoring a number of critical reviews of the impact of computing on different areas of the curriculum. The Department of Education and Science invited a number of subject associations to spend a modest sum on bringing together some "enlightened" members of their profession, to weigh the available evidence and to look into a few crystal balls. Recommendations were called for and the findings were to be published and distributed as widely as the funds allowed.

The resulting 12 documents provide an interesting conglomerate on the nature of the penetration of new technology into our classrooms and some pointers concerning aspirations and hopes for future development.

The documents do not conform to any pattern. One can only assume that the briefs from the DES were not always the same. Some will, no doubt, be referred to in years to come as "significant" in terms of professional development, others might soon be forgotten. Few mention the existence of primary schools or examinations, although most mention the GCSE in passing. Some areas of the curriculum were not part of the DES/MEP thinking, notably music, art, careers education and, surprisingly, computer studies or information technology as a subject to study.

The way in which the content was produced varied considerably. Half of the associations carried out national surveys. The Association for Science Education (ASE), for example, polled all of its 17,000 members with a rather hefty form and received just over 200 replies. Bearing in mind that the replies might just be from the more enthusiastic, any extrapolations from the sample on, for example, the penetration of computers into physics labs, from the 1 per cent response must surely be downwards.

Most of them held residential conferences with around 20 invitees representing "all shades of opinion and all sectors of the educational community". Lists of participants, printed in most booklets, show no consultation with industry or commerce in general or even the IT industry in particular. This could be considered an opportunity lost. Very few pick up issues such as gender, multi-cultural opportunities or the less able pupil - issues which must be on the agenda.

The very nature of the exercise precluded a discussion on the opportunities afforded by information technology in cross-curricular activity, but many make considerable mention of the value of the same software tools such as word processing, information handling and graphics packages in general support of the development of



## Taking stock

a particular subject area. So what are the key issues, taking the 12 documents together?

The Microelectronics Education Programme gets little mention beyond the foreword. Some praise its efforts but demand far more from the new Microelectronics Education Support Unit (MESU) which, incidentally, has about one third of MEP's budget.

The relationship with the technology itself is picked up predictably by the home economists, geographers, mathematicians (hand-held graph plotters), CDT and the scientists. The linking thread here is that technology in some way is changing curriculum content, for example, the home economists talk about "electronic shopping, microwave ovens and computer aided pattern design".

A few illustrate points with case studies - one in the modern languages booklet concentrates on the ways in which the Granville package is used throughout a mixed comprehensive 11-18 school with 1,200 pupils in eastern England - a useful section in its own right on classroom management and resource adaptation.

The general survey results could be considered rather depressing. The historians found that only 11 per cent

of the 1,362 responding schools used a computer once a month or more in history lessons and 47 per cent never at all - and remember about extrapolating downwards. Only 3.2 per cent of schools from responding local authorities had home economics departments which had their own computer.

Clearly, access to hardware is a major hurdle to progress right across the curriculum. The home economists spell out four other hurdles in a section entitled "Constraints in using the Computer", namely lack of access, lack of confidence, organization, lack of software, and lack of time. This list is probably mirrored in all the other subjects and solutions do not necessarily lie in setting up structures and pumping more money and resources into the system.

Of course, critics will ask if all the effort can be justified or if there are significant gains to be made in learning achievement. Will the IT impact be sustained? Some of the reviews attempt to define what benefits we can measure now, but most concentrate more on what is to come.

The chemists seek better graphics,

faster 16-bit micros and increase in compatibility as key hardware issues. The geographers look for remote sensing, automatic data logging and interactive video, while the CDT group want low-cost robots, simple control interfaces and 3D modelling packages.

The list is long and the planners have plenty to consider. The arguments are sometimes weak, though, and lack evidence. If we had X then pupils would learn Y, where Y was not on the curriculum before or Y would be so much more interesting. Only two reviews argue strongly for more research - those from the mathematicians and the scientists. Clearly, there is a need for more fundamental pedagogical research not necessarily related to a particular area of the curriculum.

The recommendations to the DES, the MESU etc are spelt out in appendices and, in the case of the ASE/Institute of Physics offering, run to 34 paragraphs. The mathematicians are not alone in crying out for a micro in every maths classroom. They all demand a massive increase in in-service training provision but rarely offer guidelines on what might be the most effective strategies.

Some still appear to believe in short, sharp courses and that is a little sad,

since we know that this has little impact on classroom change, even if the participants have an extremely enjoyable time and feel much more "aware" as a result.

The English specialists summarize a more effective approach: "In-service work can only be provided through a development programme that is based on schools and managed by local education authorities. A centralized national agency cannot be sufficiently sensitive towards the needs of individual institutions nor provide the continuity that is required to be effective at this level." Stirring words indeed.

Many address the information flow issue and some seek that "great database in the sky" which can respond to every request. Not every review asked for more software and there was some suggestion that many areas of the curriculum seek more time to assimilate what is already available rather than add to the already widening gap between availability and reality.

In all, we can see a number of strong ideas and recommendations coming through. The documents for the most part are useful in supporting professional development. The initial training institutions should obtain a set to support their IT activities, as should advisers with general curriculum responsibility. Heads of department, if they have not received the relevant document, should seek to obtain a copy for their staff colleagues to discuss. Subject advisers should already have received their copies.

It is, after all that, not easy to obtain some of the booklets as they are already out of print. This should be one of MESU's priorities.

Lastly, it must be noted that the reviews are addressed to a variety of decision makers. Top of the list is the Microelectronics Education Support Unit but, interestingly, there are messages for heads of department, advisers, the DES, chief education officers, industry and even the educational publishers. I wonder if they are all listening.

The 12 documents: Computers in School Biology: New History and New Technology: The Use of Microcomputers in School Chemistry: Information Technology Implications for CDT, Design and Technology: Computer Aided Language Learning for the Modern Languages Teacher: The Transition Between Primary and Secondary Schools: An Information Technology Perspective: Survey of Computer Use in Economics and Business Studies: Information Technology and Science Education: Looking Forward - An Assessment and Evaluation of CDD: Computer Council Computers in Mathematics Education.

Mike Aston was formerly National Co-ordinator for Computer Based Learning with MEP and is now Deputy Director of the Advisory Unit (Educational Technology) at Hailsham.

## New dimension

JACQUETTA MEGARRY

Random suite of programs for creating random combinations of words or phrases; two examples supplied are a Jargon generator and Consequences, supplied with utilities for splitting files and re-combining them. Readable calculates a readability index for text in memory, allowing easy revision and re-calculation. Reveal invites user to complete a partially-concealed passage by filling in letters or words using guesswork based on their knowledge of language and content.

Suspect invites user to detect an intruder sentence that doesn't belong in a passage for reasons of style, grammar or content. Thread presents a passage word by word on screen at a range of speeds for timed reading.

Most if not all of these tasks can be performed in BASIC, and probably in any other computer language; several such packages have been marketed. What is distinctive about these Word-Plus programs is that they are shorter, more transparent and much easier to edit than the equivalent Basic ones.

Furthermore, users already have suitable sample material on disc in abundance - previously written by themselves or by other users - which can be used to test the program.

be analysed at a stroke without complicated file transfers or, worse still, mindless re-keying. Unlike most published packages, our software does not presume that teachers will want to create text files specially. It also encourages students to take advantage of each other's material on disc.

Files previously saved under Wordwise can be processed as they stand; even text prepared under non-Wordwise word-processing systems can usually be manipulated as long as it can be read into a Wordwise Plus system, though some preparatory editing may be needed.

The ease for programmable word processing goes far beyond the particular features of this software. What is truly remarkable is that despite the constraints of relatively slow processing, the tiny memory and the outdated technology of the BBC Micro, these programs are versatile and easy both to use and to edit.

Furthermore, programmability means that the marketplace can participate in refining a product after its publication. Given that field-testing of software in its pre-release state is often omitted always rushed and never comprehensive, building flexibility into the product itself has attractions both for customers and producers.

Computer education is still handicapped by the widespread misconception that computers are only about numbers. This goes on many people's

who feel nervous about maths and science, and is misleading in a world where data processing and text handling are often more significant uses of computer power than number crunching. All too often, computer literacy has been approached by teaching people to use and attempt to write trivial mathematical programs in languages such as Basic.

Languages such as WordPlus offer a radically different approach. They allow students to use, write and edit programs which work on text that they have keyed on or loaded from disc, without ever leaving the word processor. This has special attractions for introducing computing to teachers and for students who are interested in words and language play and may find traditional approaches off-putting. Designers of word processors for the 16 and 32-bit systems of the future make a serious mistake if they fail to make their systems programmable.

The TVEI WordPlus Software Pack is published by the Leeds Permanent Building Society, Leeds. It is available from the Leeds Permanent Building Society, Leeds. It is available from the Leeds Permanent Building Society, Leeds.

The TVEI WordPlus Software Pack is published by the Leeds Permanent Building Society, Leeds. It is available from the Leeds Permanent Building Society, Leeds. It is available from the Leeds Permanent Building Society, Leeds.

EXTRA REVIEWS

## Simulations from Scetlander

## Northern enterprise



Holiday: Airline Reservation; Catch; Car Hire; Stock Control Software on disc for BBC B, B+ and Master; other systems as stated. Scetlander Ltd, 74 Victoria Crescent Road, Glasgow G12 9JN.

Scetlander is a joint venture of SCET, the Scottish Council for Educational Technology, and Ron Lander, a leading Scottish businessman who made his money in burger alarms. He is also Director of Glasgow University's Centre for Entrepreneurial Development and the partnership is a good example of how industry and education can collaborate with mutual benefit.

The software is widely used in Scottish education but has not previously been available elsewhere. The company is marketing educational software throughout the world and has already signed three-year contracts with Luxembourg and Norway.

Although the 60-program catalogue shows a variety of subjects, which can contribute to "enterprise education" throughout the age range. These carry more conviction than the "mainstream" educational software, some of which throws good programming at ideas of dubious educational value.

Scetlander software is generally good value, with competent graphics and sound effects, and signs of an emerging house-style. Pressing CTRL-T at the title screen produces a teacher menu, allowing control of various options such as sound, weather or difficulty level. Unfortunately it doesn't do so consistently or concisely. The number of title/menu pages varies from two to four, with accompanying jingles and scrolling graphics to thwart a reviewer in a hurry to get at the program. Still, the idea of teacher access is good, even if its implementation isn't perfect.

The software is packaged simply: the A4 format is a reflection of the company's desire to sell licences with i.e.s. doing their own disc and paper copying. A standard folder holds the disc securely, though its height makes it inconvenient to shelf and scan. The documentation is comb-bound, serviceable rather than attractive, and the computer printout could be improved by proportional spacing, better layout and more diagrams.

Although pupil notes are normally provided, the language level tends to be high; even the teachers' notes can be obscure in places. They usually open with a summary of the program's title, file name, subject, objectives, level and contents - helpful where available, frustrating when incomplete.

Holiday (£15; BBC/Spectrum) models the flight booking aspect of holiday choice - accommodation is assumed always to be available. If flights are Pupils choose a holiday in one of three resorts in each of six countries, based on an illustrated brochure; if the holiday is available, the program calculates the cost. The departure airports may seem a strange choice to those who live in South Britain (Glasgow and Edinburgh but no Heathrow or Gatwick). However, as part of any primary project on holidays, the program could stimulate a range of language work; it also gives experience of a process of booking not unlike a tour operator's viewdata service, so it might appeal to secondary pupils.

Airline Reservation (£12.50; Apple/BBC/RML) is much more realistic; it allows pupils to look up flight timetables and costs, reserve and cancel seats, and produce passenger lists with specific name searches. It could support interesting work in any computer awareness or computer studies course.

The subject of building societies does not normally divert the young student's attention. But Inventing Time attempts to dispel the societies' rather stolid image by involving participants in managing a branch office. Decisions may be made on the location, design and maintenance of the building, personnel problems, the aspirations of customers, and the issues involved in changing work loads, as well as mortgage applications.

The simulation may be run by anything from one to 30 students performing a variety of roles. It breaks down traditional subject boundaries and calls for a range of cross-curricular skills. This commercial role-play has much to offer in its need for communication and problem-solving skills, and a part with mathematics in

as a model of a real-time booking system; a range of worked examples is provided. Realism is limited, of course: seat allocation omits the real-life question about smoking, for example.

Catch (BBC £17.50, Nimbus £19.50) is a delightful fishing simulation, with decision-making based on radio information, weather forecasts and echo-sounder information. Pupils would pick up a fair amount of information on seine-net fishing and demersal fish (eg you shoot the net near the sea bed); but the program can also help them to learn the business side, with interesting trade-offs like whether to travel further to land at a port with higher fish prices.

The documentation is excellent, including an illustrated booklet of background notes with a wheelhouse photograph, "log-book" and information leaflet masters for pupils, plus teachers' notes with helpful screen dumps, instructions and price lists. Although billed as upper primary, this one could appeal to many secondary pupils; there is nothing "childish" about it and it can be used in challenging ways.

Car Hire (BBC £15, Nimbus £17) is aimed at middle and upper primary, and provides simple and enjoyable practice in decision-making. The pupils "answer" telephone booking requests, offer a suitable car, van or minibus if available, and take the financial consequences if bookings are lost or suitable vehicles unavailable. A paper keypad for the vehicles is provided within the teachers' notes, and a pupil worksheet for recording booking decisions and profits/losses. Although minor details could be improved (screen colours, worksheet design), this program is attractive if somewhat over-priced.

Stock Control (£12.50; Apple/BBC/RML) is aimed at 14-16 year olds in computing and business studies. Its title may mislead, as it only models the re-ordering of components for a production line with a fixed daily output - there are no sales, returns or defective products to allow for. Students can request information on stock levels and delivery lead times and have to try to maximize production without holding excessive stock. Progress charts are available to illustrate the position in graphic form. Although screen design is far below the usual Scetlander standard, this program is good value.

Scetlander's commitment to customer satisfaction has led to some welcome and unusual practices: provision of preview copies, feedback sheets and a programme of telephone and personal follow-up. Although some aspects of certain programs merit criticism, the company's attitude makes a refreshing change from the indifference and inefficiency of many software providers.

JACQUETTA MEGARRY

## Leading role

Inventing Time: Young Leader School Savings Club. BBC disc and booklets. The Leeds Permanent Building Society. Free from local branch manager.

The subject of building societies does not normally divert the young student's attention. But Inventing Time attempts to dispel the societies' rather stolid image by involving participants in managing a branch office. Decisions may be made on the location, design and maintenance of the building, personnel problems, the aspirations of customers, and the issues involved in changing work loads, as well as mortgage applications.

The simulation may be run by anything from one to 30 students performing a variety of roles. It breaks down traditional subject boundaries and calls for a range of cross-curricular skills. This commercial role-play has much to offer in its need for communication and problem-solving skills, and a part with mathematics in

budgeting, costing and decision-making based on numerical information; with economics in costing alternative locations, prediction of performance and market research; and with art in the design of office fittings and publicity.

The Young Leader is a computerized school savings scheme, accompanied by a free explanatory video. The program enables pupils to open accounts and make payments and withdrawals. Students nominated as cashiers enter a password to gain access to the school's accounts. Other facilities include account enquiries and the calculation and crediting of interest.

This student-run building society requires minimal staff supervision. Normally, cashiers are selected by the local "Leeds" manager and/or a member of the school's teaching staff. Letters of application and formal interviews may be used in the selection process, and cashiers may receive a badge of training with the local branch.

In the accompanying video Pete Crowther explains that the purpose of the club is to introduce students to "the art of saving". Primary school pupils are seen playing the roles of cashier and depositor (no prizes for guessing the sex of the cashier). We are told that it is possible to bank some of the money, or make special arrangements with the local branch of the Leeds (which has one of the highest interest rates etc). The presenter illustrates a simple transaction and then hands us back "to the Leeds Permanent representative who is with you now".

While this is only one among several computerized school savings clubs operated by large building societies, it does work smoothly and it is free.

The package is accompanied by three rather lame computer games, the first of which carries the message: "You need only £1 to open an account with the Leeds". This kind of rather unusable, promotional, parades such educational resource packs, and a badge of training with the local branch.

DAVID WHITEHEAD

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## EXTRA REVIEWS

**Secondary Science Software**  
Circuits (CIC Project)  
Disc for RML 3802/4802, Apple or BBC Micro £17.50 + VAT.  
RML Network version, £27.95 + VAT.  
World of Newton (CIC Project)  
Disc for BBC Micro, £17.50 + VAT.  
Investigating Circuits  
Disc for BBC Micro, £17.50 + VAT.  
BBC Network version £27.50 + VAT.  
Longman Micro Software, Longman Group UK, Longman House, Burnt Mill, Harlow, Essex.

The three programs reviewed below have one thing in common: they all allow users to study the laws of physics by creating their own world on the screen in front of them.

The problem with physics is that large chunks of it run contrary to common sense. Textbooks tell readers that the atmosphere presses on our bodies with a pressure equivalent to 10 elephants' weight (or 20 depending on its country of origin) on every square metre. Yet people still manage to walk to work and even run marathons. Sir Isaac Newton's genius led to generations of school children being told that moving objects keep going in straight lines unless a force acts on them and, furthermore, that objects will keep on moving if no forces act upon them. Unbelievable. Aristotle rules in the world of common sense - to most people's eyes cars, motorbikes and even golf balls will always need a force to keep them going.

Consequently, countless physics pupils have learnt Newton's laws like the proverbial parrot without really believing them. Similar problems exist with electricity. How many pupils believe that electricity flows both ways in a circuit and then meets in the middle? How many pupils believe that electricity is "used up" as it fights its way through bulbs and resistors? How many still believe that voltage and current are more or less the same thing, even after five years of physics education? Answers to these questions, and many others, are being provided by current research.

The point of this review is to raise

The laws of physics v common sense

## Newton's parrots?



the question: can computer programs which simulate events in the physical world help pupils not only to learn, understand and apply the laws of physics but also to believe them?

**Circuits** and **Investigating Circuits** allow the user to create a neat and perfect world of bulbs, resistors, wires without resistance, cells, switches, and (in the latter program) voltmeters and ammeters which aren't shared one between four and don't cost half a week's wages. Both programs are easy to use and attractively presented. **Circuits** allows the user to explore a number of combinations of cells and bulbs, in series and parallel arrangements. All components belong to the perfect electrical world of computer simulations (and some might say of physics itself) where cells do not run down, equal rated bulbs give equal brightness, and pupils do not pester teachers with loose connections. **Cir-**

cuits therefore provides the perfect medium for lower secondary pupils to investigate electricity as it should be - a far cry from the ageing school Worcester circuit board.

**Investigating Circuits** provides the ideal sequel. With this program, although it is less well documented, users can construct an almost endless variety of circuits on a 4 x 4 matrix and begin to "measure" electricity. Voltmeters and ammeters can be brought in at different places in the constructed circuit, values can be given to cells, lamps and resistors, and readings can be taken. In the accompanying booklet it is emphasized that "the program is not designed to replace practical work but is for use in conjunction with real circuits." For example, a circuit can be created on the screen then built up and tested in practice. This will allow comparison between the ideal world of the computer simulation and the real

world of the school science lab. But how many teachers will have the resources to allow both sides of the comparison?

**The World of Newton**, like the two electricity programs, allows the user to investigate a microworld unfettered by the complications of the real world. The program uses a small oblong object which can be moved around the screen with "kicks". The booklet tells you that this object "moves on the screen according to Newton's Laws of Motion". This is true, and very obvious when it travels perpetually like some sort of electronic ice pick - but all everyday objects behave according to Newton's laws of motion. This is the difficult part for the learner and requires the shift in belief first made by the genius of Newton. This program alone may not be enough to shift Aristotelian ideas, but it can help. The program has four main parts.

Firstly, in "Dynamics" the Newtonian object's mass can be varied. Graphs of "kicks" can be applied in four directions - gravity and friction can be present or not as the user requires. The object's mass can be varied. Graph grid lines can be superimposed on the screen if the object's motion is to be studied closely. In the second part, "Game Design", targets and barriers for the Newtonian object can be created so that one pupil can set a game for another to play. The third and fourth parts of the program are also games which both involve moving the Newtonian object through a complicated maze ("Crazy Maze") and in the final part in the shortest possible time ("Beat the Clock"). The latter parts of the program therefore involve arcade-like games which (as the booklet points out) will appeal to a wide range of ability.

My suspicion, however, is that only pupils of considerable ability will be capable of using this program to enhance their understanding of Newton's laws. The majority will see the program's later stages as a slightly strange arcade game, particularly as the competitive instinct takes the upper hand. Intervention, imagination and a strong will are certain to be needed by the teacher in extracting educational value from the program once the competition sets in.

Despite these misgivings, I feel that **The World of Newton** is an ambitious and imaginative program which could help pupils to understand Newton's laws if it is used by a determined teacher. The program is well documented for pupils and teachers with a superb account of Newton's law of creativity written by the program's author, Jon Ogbon.

All three of the programs reviewed above will help pupils to learn, understand and apply some of the laws of physics. Whether computer simulations of this kind encourage pupils to believe those laws is open to question. Perhaps it is fortunate that the assessment criteria for GCSE are stated in terms of knowledge, application and understanding, but not belief.

JERRY WELLINGTON

## Green piece

**Ecosoft**  
BBC B/B+, Master, Compact and BBC network, £20.  
AUCBE (Advisory Unit for Computer Based Education), Endymion Road, Hatfield, Hertfordshire.

I have suffered science software for over four years and in that time there have been very few software packages that I would recommend to my colleagues. After an hour with **Ecosoft**, the message I would take to the head of biology is that if you do field work, you had better invest in this package, as this suite of data handling utilities

would be of great value in ecology. The software would also contribute greatly to lower school science or science courses where emphasis is placed on process skills.

The great merit of **Ecosoft** is that it is so easy to use, yet it is very powerful, although it may not be powerful enough for advanced research. This software has been written by teachers who understand the difficulties involved with biology field work. The authors have used the computer to minimize these difficulties in order to allow pupils to manipulate data and transform statistics into useful graphics.

DANNY FEELEY

Changing the course of English history

## Village politics

**Norman England**  
The Theng  
The Knight  
The Villain's Wife  
The Bard's Daughter  
40/80 track disc for BBC models B/B+ / Master 128; 3.5 disc for Master Compact  
£35.00. (+VAT).  
Ferneleaf Educational Software, Fernleaf House, 31 Old Road West, Gravesend, Kent DA11 0LH.

The turbulent events in an English village between May 1066 and July 1067 provide the historical context for these explorations into the responses of ordinary people subjected to rapid change. Each program looks at what became of people who lived or who came to live in the village. In May 1066 the village was controlled by the Theng. His control comes under increasing challenge and he is replaced by a Norman knight in February 1067.

The two programs on the Theng and the Knight have a similar format. Ideal leadership qualities are defined through a series of multi-choice scenarios. Do you, as Theng, simply do what the villagers want? Or do you listen and then do what you think is right? Do you, as Knight, appoint people you know or do you choose the best people for the job? Do you demand your own way or do you persuade people you are right?

A series of rapid decisions are then made by the Theng and the Knight. Should the Theng resist the Normans? Should the Knight build a castle, or a manor house? Each program concludes by measuring the sort of leadership you said you would like to provide against the sorts of decisions you actually made in practice. The discrepancies are illuminating and invite productive discussion.

Domestic dilemmas confront the Theng and the Knight as they are defined initially and then measured

against actual decisions. In this case the players are required to analyze the discrepancies themselves. **The Bard's Daughter** is a strategy game. The Bard flees the village after a quarrel with his daughter's husband-to-be, a soldier in the Knight's service. The daughter and the Normans in the village each search for a way to make moves in turn on a diagram of the village. Some planning is possible but there is a high incidence of luck. The subject depends on poverty of the Bard's families as well as the joining of Saxon and Norman to form one nation are incidental themes. In the end it might have been more appropriate as a simple board game.

The programs form a package linked by a series of code words. Decisions taken by the Theng affect the other programs. Alternatively the programs can be played by themselves without reference to each other.

Possibilities for further work lie in the changed circumstances of the central characters. How does the Theng respond to his new situation? The Knight has gambled and his future depends on the success of the village. Can he return to Normandy with the probable consequences of a broken promise?

Where will the Bard's daughter make her new life? Users will need to be familiar with the social hierarchies, basic strategies and some of the terminology associated with a Norman village. A series of three programs for use with the **Bard's Daughter** are provided. These programs provide interesting, if not challenging, exercises for younger pupils. The four multi-choice scenarios and the cost of each package has thought through the program, trying to achieve, in the end, a curriculum intent in the teacher's mind. The program is a model of its kind.

GORMAN STARKES  
JOHN TUN

## EXTRA REVIEWS

Why do deserts get bigger?

## Shifting sands

**Sand Harvest**  
BBC B, Disc £27.50 + VAT  
Longman Micro Software, 33-35 Tanner Row, York YO1 1JP.

Development and third world topics are very much a feature of contemporary curriculum content; nevertheless, teachers are poorly served for choice when it comes to relevant computing resources.

**Sand Harvest** has been developed by the Centre for World Development Education to help meet this deficit, and it does so by providing a simulation dealing with the inhabitants of Mali and the causes and effects of desertification.

Pupils are split into three groups, each taking the role of a nomad, villager or government official in the Sahel. In the process each group pursues activities which may be either mutually exclusive or co-operative with others to the benefit or otherwise of the environment.

In this simulation participants not only interact with the computer-generated situation but also with each other, either within or between groups. Herein lies the strength of the program, as it provides a vehicle for discussion-work dealing with complex multi-disciplinary issues. This is relevant at a time when teachers are being encouraged to develop a less didactic methodology.

Pupils are made aware of the distinctive preoccupations of their group and

the associated values that surround these. The "nomads" obviously focus upon the physical well-being of their animals but also appreciate the social status attached to animal ownership and the marginality of the monetized economy.

This contrasts with the "government" group who recognize the handling of budgets, provision of schemes, generation of food supplies and foreign exchange. The full simulation is appropriate for upper secondary classes but an options editor allows the teacher flexibility in selecting a number of development scenarios so that particular themes can be focused upon. It is up to the teacher to experiment with the possibilities offered in the light of the age, ability and size of class being taught.

The focus of the documentation is a series of information booklets providing background data for the respective roles. These items stand in their own right for use beyond the computer. There is a useful section dealing with follow-up work activities and a poster is included.

Unfortunately the software is disappointing. Criticism can be levelled on two grounds: first, the design and running of the program and, second, the practicality of using the item with a class. The "Break" key has not been disabled and users can inadvertently terminate the simulation. Throughout the program the arrow keys are used to determine options, but in a confusingly inconsistent manner. The screen dis-

plays are generally good with effective choice of colour and well laid out, clear text. There is a facility to dump to printer.

It would seem that the time required at the keyboard is not the same for each group and this particularly applies to the "government" role. Teachers may emphasize that the amount of time at the terminal is not a paramount criterion in the running of the simulation, but the perceptions of pupils may be otherwise. In any case groups may find themselves merged as when "nomads" lose animals and become "villagers". This affects class organization because discussion groups become unwieldy in size.

It is points such as these which need to be addressed at the design stage and the evidence suggests that these have been neglected. Software must be both educationally valid and practical to run.

**Sand Harvest** is a complex simulation with a wide range of options and to do these justice the resource should be seen in terms of use over a number of lessons. A multi-media approach with video and text is relevant. The program should not be dismissed as a resource because in the hands of a teacher familiar with Computer Assisted Learning, and used with pupils who have already had a taste of discussion work with computer simulations, the collective experience may lead to some very worthwhile lessons.

JOHN CHUBB

## Byte

**Teeth**  
BBC £15 + VAT  
AVP Computing, Hocker Hill House, Chestport, Gwent.

This software has been produced to teach children about teeth. Holding >shift and pressing >break >auto, matically starts the program. Within seconds your computer makes the most grotesque noise. Don't worry, your computer is not about to self

destruct, it is just this programmer's attempt to entertain you with some computer "music".

After you silence the "beast", you are presented with a menu which offers insight into three aspects of teeth plus a test. The first option presents users with 52 facts in five very dull screens of text and graphics and there are two further options. My disc drive could not read the rest of the disc, so I was spared having to dull my mind further with this banal program.

It is sad that teachers not familiar with the power of computers may have their first introduction through this type of software.

DANNY FEELEY

## bits

### NEWSPEAK

Orovox is an artificial voice aid which can be used as a stand alone device or as a speech synthesiser linked to a computer. It is aimed at people with a vision and/or speech disorder. Speech Systems Ltd., Unit 8, Enterprise Row, Rangemoor Road, London N15.

## ADDISON-WESLEY

**EDLIB**  
An Electronic Library System  
Project Director:  
M Bostock

**EDLIB**, a bar code reader library management system, has been designed for use in the average-sized school, college or departmental library. It will cater for the issue and return of up to 65,000 items to 2,500 users. The facilities in the package include many of the features found in most main public libraries, and some specifically applicable for school use. **EDLIB** also provides a model that can be used in the teaching of information handling and communication skills.

**EDLIB** may be dual managed, either by use of the bar code reader or the keyboard. The full **EDLIB** package contains a bar code reader; a program disk; a Tapes File; a user manual; sample bar code tickets for books and users; function key strip for the keyboard.

There are two distinct parts to the library system: an Issues Systems

used in conjunction with a Titles File, and a Catalogue System. In addition, a System Manager section provides utilities for creating and managing the files, issuing bar codes and searching the database. The Catalogue System (technically known as a FIP system) allows an interface between **EDLIB** and other database systems such as **QUEST** and **INFORM**.

**EDLIB** enables users to be issued with their own unique library ticket. This ticket records the user's name, the library account number and the books out on loan. A maximum of three items per user has been allowed, but this can be increased to 12 by allocating extra accounts to any one ticket.

Systems Requirements: BBC Model B or Master Series 128; Dual 80-track, double-sided disk drive; Printer: Epson, Walter, Daisy Wheel and most other standard printers.

1987/0 201 17541 X/D8C Micro Disk Pack (80T)/£114.95 + VAT

**GCSE COMPUTER STUDIES**  
An Applications Approach  
P McGee & G Williams

Satisfying the main objectives of 16+ National Criteria for Computer Studies, this book deals with the major topics of a computer studies course and covers computer systems analysis, design and applications. It also integrates questions, discussions and activities. Specimen GCSE examination questions are provided. 1987/200pp/0 201 19071 0/paper/£5.95

**A LOOK AT COMPUTERS**  
An Introduction to Computer Studies  
J Winch & J McCarney

This introduction to computers and IT for pupils of 10-14 years, covers the new Scottish syllabus for S1 and S2 in Computer Science. Intended to motivate, much pictorial information is given and pupil activities are integrated. It introduces computing concepts through real-world situations. 1986/56pp/0 201 19072 9/paper/£4.50

Phone us for a free copy of our catalogue.  
Addison-Wesley Publishers Ltd., Finchampstead Road, Wokingham, Berkshire RG11 2NZ. Tel: (0734) 794000.







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## Mathematics

Tel: 01-581 7471  
 From September 1987  
 will qualified HOME ECONOMICS SPECIALIST to be responsible for the teaching of the subject throughout the School (levels 11-18) to GCSE and A level. The successful candidate, with previous qualifications, will possess the ability to assist with extra-curricular activities a relevant experience.  
 Enhanced Burnham salary and Outer London allowance applicable to all experienced. Subsidised accommodation possible.  
 For further c.v. and names and addresses of two referees to send to: The Headmaster, Middlesex School, 100, where further details are available. (00713) 1830.

**MIDDLESEX**  
**ST. HELEN'S SCHOOL**  
 Northwood, Middlesex  
 Tel: 01-881 7471

Wanted in SEPTEMBER on a 12-month contract for the Home Economics Department. The department teaches the following courses: Food and Textiles, Home Economics, and CSE and GCSE "A" level. It is situated in an attractive well equipped block which contains two Home Economics rooms, a craft room with associated accommodation, Ability to live in the department. The whole of the entire day runs advance notice of the position is available for a suitably qualified and experienced applicant. Live in facilities and help in related extra-curricular work are available. Please apply in writing to the undersigned, with a c.v. Name of two referees. 18363 (154242)

**ITALY**  
**ROME**  
Well qualified Romantic  
History Teacher required  
September 1987  
See Overseas Appointment  
for details. 144372; 183

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**KENT**  
**THE DUKE OF YORK'S**  
**MILITARY SCHOOL**  
(Independent Boarding

Candidates must be prepared to commit themselves to a full-time teaching schedule and an ability to coach at least one of the following sports: Basketball, Hockey, Cricket, Football, Tennis, Badminton, Table Tennis, and Volleyball. The work could be made available to a suitably qualified candidate in the form of a part-time position at the Schomberg Court House Project 13-16 hours per week. The position is an excellent opportunity for an individual with a strong interest in the social and economic aspects of the environment, and a keen interest in careers. Candidates should have a tertiary level of education and a strong approach to a skills based learning and a willingness to undertake a full range of excellent resources available.

Both married and single  
accommodation is available  
on the School Estate at a  
rent.

Salary will be based  
the new 'Main Professional  
Grade' until subject to con-  
firmation of a new salary  
scale for the School A-  
warance.

Application forms  
available from: Military  
Defence Area Civilian HR  
Manager, Napier Barracks  
Shorncliffe.  
Tel: 01753 634333 (Ext 3333)  
or 01753 634333 (Ext 3333)  
(0303) 395411  
(2002) and should be  
sent to:

**The Arts Education Trust**

**(Independent Girls)**  
311 Pu

**Required to start F**  
**experienced and**  
**teach HISTORY 13**  
**preparation for GC**  
**and some JUNIOR**

**Applications with  
of two referees should  
Tring by 20th March  
30th March 1987.**

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**The Arts Educational Schools  
Tring Park,  
Tring,  
Herts HP23 5LX**

**(Independent Girls' Boarding and Day School:  
311 Pupils aged 10 - 18)**

**Required to start Full Time in September 1987 an  
experienced and suitably qualified person to  
teach HISTORY 13 years - 18 years, including  
preparation for GCSE to 'A' level (Small Group)  
and some JUNIOR ENGLISH.**

**Applications with CV and names and addresses  
of two referees should reach the Headmistress at  
Tring by 20th March, with a view to interview on  
30th March 1987.**

**(11337)**













# INDEPENDENT EDUCATION

**SUFFOLK**  
**FRANLINHAM COLLEGE**  
 Woodbridge, Suffolk IP12 9P  
 M.C. - boarding - co-educational - 500 pupils  
 Required for September 1987.  
 A graduate to teach Biology, Chemistry, Physics or General Science. Willingness to play a full part in boarding school life essential. Salary scale, 15-18 years. Own salary scale. Write with curriculum vitae and names of two referees to the Headmaster. 184824 (05847)

**SURREY**  
**WINDERS SCHOOL FOR GIRLS**  
 Haslemere, Surrey  
 Day, 11-13 years (Boarding and Day)  
 Applications for a temporary (one term) appointment required for September 1987 to teach BIOLOGY throughout the school. Salary based on Burnham scale. Possibility of permanent appointment in September 1987. Applicants should be experienced graduates and are asked to forward curriculum vitae with the names and addresses of two referees to the Headmaster. 184824 (05847)

## Social Studies

## Other Assistants

**SURREY**  
**HURTWOOD HOUSE SCHOOL**  
 Required for September 1987, a young experienced teacher offering combination of Law and Business subjects. Apply Box No. 06877, Prior House, 100, High Lane, SC14 4BX, with C.V. and details of two referees. Full details will be sent on receipt of applications. 185024 (44189)

## ST. GABRIEL'S SCHOOL

### SANDFORD PRIORY

### NEWBURY, BERKSHIRE

### Independent Day School for Girls

### GSA/IAPS (5-16)

Required for September 1987

1. Teacher of ENVIRONMENTAL SCIENCE with responsibility for developing this subject throughout the School and for marketing the extensive grounds as a teaching resource. Ability to teach GCSE GEOGRAPHY essential.
2. Head of PHYSICAL EDUCATION to develop this subject throughout the School.

Details available from School Secretary. Please apply to the Headmistress, in writing, giving names and addresses of two referees. (14801)

## CULFORD SCHOOL

Bury St. Edmunds, Suffolk IP28 6TX  
 HMC CoEd Boarding & Day 8-18 years

Required for September:

1. A MATHEMATICIAN to teach across the 11-18 age range, but with the possibility of some Sixth Form work.
2. A BIOLOGIST to teach across the 11-18 age range, with some junior chemistry.
3. A teacher of mainly middle school PHYSICS and CHEMISTRY, preferably able to contribute also to Sixth Form General Studies programmes. This is a one year appointment to replace someone on study leave.

All members of staff are required to contribute to extra-curricular activities and boarding duties.

Salary is on the Culford scale, above Burnham. A willingness to take games (boys or girls) and/or to be resident (free lodging throughout the year; free board in term time) would be strong recommendations.

Apply with full C.V. and names, addresses and telephone numbers of two referees to the Headmaster as soon as possible.

## Speech and Drama

## Other Assistants

**MERTON**  
**URSULINE HIGH SCHOOL**  
 15 The Downs, Wimbledon, London SW20 8BD  
 Girls' Roman Catholic Comprehensive High School, 8 form entry 13-18, 870 pupils  
 Required for September 1987, a teacher to take charge of Food and Nutrition to GCSE and possibly A Level. The post will suit an able and enthusiastic teacher willing to be involved in the full range of school life. Salary will be in line with the English in the Main School. A scale post available for a suitable application.  
 Please apply to the Headmaster with names and addresses of two referees and full details of two referees to the Headmaster. 185024 (05847)

## Technology

## Other Assistants

**PERTHSHIRE**  
**STRATHALLAN SCHOOL**  
 Please see advertisement in THE TIMES EDUCATIONAL SUPPLEMENT, 13.3.87, page 84.

## WEST YORKSHIRE

**ACKWORTH SCHOOL**  
 West Yorkshire  
 BHMS, Quaker, co-educational, boarding and day

The Head will be interested to hear from prospective and suitably qualified teachers who wish to join the staff of this school. The Head will be interested to hear from prospective and suitably qualified teachers who wish to join the staff of this school. The Head will be interested to hear from prospective and suitably qualified teachers who wish to join the staff of this school.

An appointment is envisaged in September and further information can be obtained from Ackworth School, 100, High Lane, SC14 4BX, with C.V. and details of two referees. Full details will be sent on receipt of applications. 185024 (44189)

## Other than by Subject Classification

## Heads of Department

**ESSEX**  
**RANCOFT SCHOOL**  
 Woodford Green, Essex IG8 0XP  
 Required for September 1987, a teacher to take charge of Food and Nutrition to GCSE and possibly A Level. The post will suit an able and enthusiastic teacher willing to be involved in the full range of school life. Salary will be in line with the English in the Main School. A scale post available for a suitable application.  
 Please apply to the Headmaster with names and addresses of two referees and full details of two referees to the Headmaster. 185024 (05847)

## Other Assistants

**ITALY**  
 Requires for September 1987, a teacher to take charge of Food and Nutrition to GCSE and possibly A Level. The post will suit an able and enthusiastic teacher willing to be involved in the full range of school life. Salary will be in line with the English in the Main School. A scale post available for a suitable application.  
 Please apply to the Headmaster with names and addresses of two referees and full details of two referees to the Headmaster. 185024 (05847)

## KENT

## ROCHESTER TUTOR

We are an expanding independent sixth-form College having vacancies for 7/8 and 9/10 Tutors from September 1987 in the following subjects (to A-Level):

- 1) Economics, Geography, Law Accounting, Business Studies, Mathematics, Chemistry, Biology, Physics, Computing, English, EFL, French.
- 2) Small group/individual tuition.
- 3) Friendly working atmosphere.
- 4) Good rates of pay.

Applications from tutors offering more than one subject will be particularly welcome. Please write, including C.V. to the Director, 3, Star Hill, Rochester, Kent ME1 1XP. (06835) 185024 (35605)

## BROMSGROVE SCHOOL

Bromsgrove, Worcs., B61 7DU.  
 Tel. Bromsgrove (0527) 32774

Co-educational. Boarding and day. 100 attractive acres. Excellent facilities.

Upper School: H.M.C. 440 pupils 13-18  
 Lower School: I.A.P.S. 280 pupils 8-13

To cater for a controlled expansion of pupil numbers, each School requires one or more YOUNG, DYNAMIC and FORWARD-LOOKING TEACHERS FOR SEPTEMBER, 1987

Subject flexible. Ability to nurture excellence in one or more areas of school life essential.

Bromsgrove Salary Scale. Married and single accommodation available. Applications and curriculum vitae to Headmaster, T.M. Taylor, M.A., from whom further details may be obtained. (18208)

## Preparatory Schools

## Headships

**SURREY**  
**DOWNSIDE LODGE PRE- PREPARATORY SCHOOL**  
 (A.P.S.)  
 Required for September 1987, a qualified teacher for the day to day running of the Pre-preparatory school and to teach one of the classes.  
 Apply in writing with curriculum vitae and two referees to the Headmaster, Downside Lodge, Surrey CR2 3HB. (44783) 200010

## By Subject Classification

## Art and Design

## Other Assistants

**OXFORDSHIRE**  
**DRAGON SCHOOL**  
 Oxford  
 635 boys and girls  
 Fully qualified, young teacher is required in September 1987 to teach Art, drawing and painting. Somebody with experience in the school and willing to take part in the full range of school life is essential. Salary, Burnham scale 15-18 years. Further details will be sent on receipt of applications. 185024 (05847)



## THE DOWNS SCHOOL, COLWALL near Malvern

The Governors of The Downs School invite applications for the post of Head from September 1987 or January 1988.

The Downs School, founded in 1900, is situated on a superb site on the western side of the Malvern Hills. It is a co-educational school which offers full facilities to boarders and day pupils. It is well equipped and is proud of its record, both academic and in the Arts. The current Headmaster is a member of I.A.P.S.

Applicants, who should have a degree or equivalent qualification, should apply, enclosing a full curriculum vitae and the names, addresses and telephone numbers of two referees, to The Downs School, Colwall, Malvern, Worcestershire, from whom further particulars of the post may be obtained. (Tel: Colwall (0684) 40277.)

There is no closing date for applications but intending applicants are urged to apply as soon as possible. (18208)



## THE EDINBURGH ACADEMY

HEAD OF PREPARATORY SCHOOL

The Edinburgh Academy, an Independent School with membership of HMC and IAPS, invites applications for appointment as Head of the Preparatory School in September 1987 or January 1988 on the retirement of Mr J.A. Burnet.

The Preparatory School has a fine academic, sporting and musical record. There are 300+ boys aged 4 to 11 (including some boarders) and a Nursery Department. The School is situated at Inverleith on a separate campus, about one mile from the Upper School to which boys move at the age of 11.

For further details and conditions write to C.F. Slingsby, CA, Secretary and Treasury, The Edinburgh Academy, 14 Atholl Crescent, Edinburgh EH3 8LD. The closing date for completed applications will be 14th April 1987. (18208)

## Worcestershire

## ABERDEENSHIRE

**Worcestershire**  
**ABERDEENSHIRE**  
 Required for September 1987, a qualified teacher for the day to day running of the Preparatory school and to teach one of the classes.  
 Apply in writing with curriculum vitae and two referees to the Headmaster, Downside Lodge, Surrey CR2 3HB. (44783) 200010

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**Worcestershire**  
**ABERDEENSHIRE**  
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## Middlesex

## MARTIN'S SCHOOL

**Middlesex**  
**MARTIN'S SCHOOL**  
 Northwood, Middlesex HA6 3JL  
 IAPS (300 boys including 45 boarders)  
 Required for September 1987, a well qualified Physical Education specialist to help with the teaching of PE and games throughout the school. The successful candidate will have a teaching general qualification and a middle age range also required.

All boys do 6 periods a week of PE throughout their school career. There is a large well equipped gymnasium, covered heated swimming pool, 3 tennis courts, 15 acres of sports fields, so there is plenty of scope for an enthusiastic specialist.  
 Salary: Burnham Scale 1 plus London Weighting or single accommodation and vicaried free of charge in lieu. Apply in writing with curriculum vitae and names of two referees to the Headmaster, stating suitable subjects. 204224 (44783)

**SURREY**  
**CHINTHURST SCHOOL**  
 Chintthurst, Surrey GU26 3QZ  
 Tel: Tadworth 2011  
 I.A.P.S. 210 boys (for 350 boys 3-13 years)  
 A teacher of Games and P.E. to join an expanding department. Ability to coach the school subject an advantage.  
 Salary: Burnham Scale, D.E.S. Superannuation, London Fringe Allowance, accommodation available if required.  
 Applications to the Headmaster with two referees (35424) 204224

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**CHINTHURST SCHOOL**  
 Chintthurst, Surrey GU26 3QZ  
 Tel: Tadworth 2011  
 I.A.P.S.



# PREPARATORY SCHOOLS

continued

## EAST LOTHIAN

**DELHAVEN HILL SCHOOL**  
Dunbar EH42 1NN

Required for September 1987, teacher of Science and Geography to C.V. and Scholarship level. Ability to help with games useful.

Salary according to Scottish Negotiating Committee.

Single or married accommodation available.

Apply in writing to the Headmaster with two references. (35554) 204818

## Other Assistants

**CROYDON**  
TRINITY SCHOOL  
Croydon  
TEACHER  
Required for September 1987 - see under Independent Schools. (35506) 204824



## THE HABERDASHERS' ASKE'S SCHOOL ELSTREE, HERTS. WD6 3AF

(HMC - INDEPENDENT - 1300 BOYS -  
200 IN PREP SCHOOL IAPS)

Required for September 1987:-

Teacher of JUNIOR GENERAL SUBJECTS in the Preparatory School.

Strong interest in games and extra-curricular activities desirable.

Salary generous London Burnham.

Please telephone the Headmaster's Secretary (01-207 4522), for further details. Applications with full c.v. and names of referees should be sent to the Headmaster as soon as possible.

## Hampshire DUNHURST

Bedaes Junior School  
(I.A.P.S. Co-Educational Boarding)

## CLASS TEACHER

required for September 1987 a qualified, dedicated and enthusiastic teacher of general subjects including English and Mathematics for a class of children aged 8+. There is scope to work with older pupils as well. This is an exciting opportunity to work in a stimulating and interesting educational environment.

Special Bedales and Dunhurst salary scale.

Apply to the Headmaster, Dunhurst, Alton Road, Steep, Petersfield GU32 2DP enclosing curriculum vitae and names and addresses of three referees. (4021)

## ROSEMEAD PREPARATORY SCHOOL LONDON SE21

Requires for September 1987 a Form Teacher for a Class of 7 to 8 year old boys and girls.

Rosemead is one of South London's leading Independent Preparatory Schools with a consistent record of high academic attainment.

Applicants should be fully qualified with at least three years relevant experience preferably in the independent sector. Ability to contribute to extra-curricular activities, especially boys' or girls' games, will be an advantage. Salary will be equivalent to Burnham Scale 1 plus inner London weighting.

Applications with full c.v. and the names and addresses of two referees should reach the Headmaster, Rosemead Preparatory School, 70 Thurlow Park Road, Dulwich, London, SE21 8HZ not later than 27th March 1987. (35481) 204818

## WARWICKSHIRE

**DUNCHURCH-WINTON**  
HALL (I.A.P.S.)

Required for April or September a teacher to be responsible for SCIENCE in the school. Ability to teach Maths, and possibly to coach hockey, cricket and athletics, would be an advantage.

Burnham Scale 1 post. Apply with names and addresses of two referees to the Headmaster, Dunchurch-Winton Hall, Mr. Rugby, Warwickshire CV39 6NG. (44581) 204824

**WORCESTERSHIRE**  
**BROMSGROVE SCHOOL**  
Please see main display ad under Independent Schools. (35479) 204824

## Speech and Drama

### Other Assistants

#### LONDON E18

**SNARESBROOK COLLEGE**  
Junior teacher required for September 1987 to teach 8/9 year old class. The Headmaster, Snarebrook College, 75 Woodford Road, London E18 1JH. (44581) 204824

## SOMERSET

Two assistant teachers wanted for September 1987. One for a preparatory school and one for a permanent position. Please apply with C.V. and names of two referees to the Headmaster, St. Martin's School, 19 Pembroke Square, London W2. 101-229 205624

## HAMPSHIRE

**ST SWITHUN'S JUNIOR SCHOOL**

An energetic and creative class teacher required for September for a class of 8-9 year old girls.

Applications in writing, with a full c.v., references and names of two referees, to the Headmaster, St. Swithun's Junior School, Alresford Road, Winchester, Hampshire SO21 1JH. (35593) 205624

## Other than by Subject Classification

### Heads of Department

#### LONDON

**KINGSWOOD SCHOOL**  
14 Woodside Park Road, London N12 8EP.  
HEAD OF PREPARATORY DEPT. (4-7-7-7). Burnham Scale 1. Apply with C.V. and names of two referees, to the Headmaster. (35455) 205618

#### READING

**THE ABBEY SCHOOL**

JUNIOR DEPARTMENT

Required in September 1987, a qualified member of staff to take charge of a form of 7 to 8 year-olds. Burnham Scale.

Please apply to the Headmaster with full curriculum vitae. (44587) 205618

### Other Assistants

#### BERKSHIRE

**HOLME GRANGE SCHOOL**  
Bathampton Road, Reading RG11 3AA. I.A.P.S. Co-Educational Day School. 200 pupils ages 4-13. Required for September, two infant trained and qualified teachers, preferably with one or two years experience, for a class of 15 children aged 4-5 and 15 children aged 5-7. The school has 200 pupils and is expanding to numbers 250. Salary Burnham Scale 1. Apply with full c.v., curriculum vitae and telephone numbers to the Headmaster. (35478) 205618

#### BIRMINGHAM

**EDBASTON HIGH SCHOOL**

Westbourne Road, Birmingham B20 8AQ. Required for September 1987 a full time well-qualified teacher to be in charge of a class of 8-12 year olds teaching all subjects. An interest in primary science and ability to take games would be an advantage. Salary is on Burnham Scale. The school is situated in a pleasant residential area south of the city centre. Applications should be made with names and addresses of two referees to the Headmaster of the school. (35478) 205624

#### BUCKINGHAMSHIRE

**AXELBY WOOD SCHOOL**  
Buckingham Road, Aylesbury HP8 4LH. (500 pupils, ages 3-13). Required for September, a class teacher for 8-9 year olds. Burnham Scale. Government superannuation. Apply in writing to the Headmaster, enclosing curriculum vitae and names of two referees. (35584) 205624

#### CHESHIRE

**CHEADLE HULME SCHOOL**

JUNIOR DEPARTMENT (Ages 7-11). Required for September 1987 a teacher for junior school. An interest in drama and music advantageous. Job available for a first appointment. Salary according to Burnham Scale. Apply with full c.v. and names of two referees to the Headmaster, Cheadle Hulme School, Cheadle, Cheshire SK8 5JH. (44581) 204824

#### GUILDFORD

**WETTERBY SCHOOL**

Required for September 1987, a fully qualified Class Teacher for a class of 8-9 year olds. Apply with C.V. and names of two referees to the Headmaster, Wetterby School, 102 High Street, Guildford GU1 1JH. (35593) 205624

## HAMPSHIRE

**ST SWITHUN'S JUNIOR SCHOOL**

An energetic and creative class teacher required for September for a class of 8-9 year old girls.

Applications in writing, with a full c.v., references and names of two referees, to the Headmaster, St. Swithun's Junior School, Alresford Road, Winchester, Hampshire SO21 1JH. (35593) 205624

## HERTFORDSHIRE

**KINGSWOOD SCHOOL**

I.A.P.S. 4-13-13-14 Co-ed. Class Teacher. 4-13-14 years. (Sept. 1987) 5-14-14 years. (Jan. 1988). Applications with full c.v. and two referees to the Headmaster. From whom further details may be obtained. (35478) 205624

## ITALY

Well qualified Junior Teacher required for September 1987. See Overseas Appointments for details. (44571) 205624

## KENT

Required for September 1987 a qualified teacher for a mixed class of 8 to 10 year olds. Capable of teaching Mathematics, English and General Subjects, ability to coach boys' and girls' sports. Salary Burnham 1/2 according to qualifications and experience. Apply with full c.v. and names of two referees to the Headmaster, Dulwich College Preparatory School, Courthorpe, Kent TN11 8JH. (35104) 205624

## KUWAIT

An ideal opportunity to obtain a post in British style prep school in Kuwait. See PAGES 45 and 46 for details. (35480) 205624

## LONDON ECI

**THE CHARTERHOUSE SQUARE HOUSE**  
81 Charterhouse Square, London EC1M 6EA. Required for September 1987 a class teacher for a preparatory school in the City. The school is a class teacher for September 1987. The vacancy is for a class of 6 year olds, teaching all subjects. Applications should be made with two names and addresses of two referees to the Headmaster as soon as possible. (35478) 205624

## LONDON NW3

**NORTH BRIDGE HOUSE**

Hampstead and Regent's Park. Required for September 1987 a class teacher for a preparatory school in the City. The school is a class teacher for September 1987. The vacancy is for a class of 6 year olds, teaching all subjects. Applications should be made with two names and addresses of two referees to the Headmaster as soon as possible. (35478) 205624

## LONDON NW5

**THE VILLAGE SCHOOL**

W15 1AG. Required for September 1987 a class teacher for a preparatory school. Due to increasing pupil numbers, two qualified teachers required for September 1987. The school is a class teacher for September 1987. The vacancy is for a class of 6 year olds, teaching all subjects. Applications should be made with two names and addresses of two referees to the Headmaster as soon as possible. (35478) 205624

## SUFFOLK

**BRANDISTON HALL**

Required for September 1987 a class teacher for a preparatory school. Due to increasing pupil numbers, two qualified teachers required for September 1987. The school is a class teacher for September 1987. The vacancy is for a class of 6 year olds, teaching all subjects. Applications should be made with two names and addresses of two referees to the Headmaster as soon as possible. (35478) 205624

## LONDON W2

Two assistant teachers wanted for September 1987. One for a preparatory school and one for a permanent position. Please apply with C.V. and names of two referees to the Headmaster, St. Martin's School, 19 Pembroke Square, London W2. 101-229 205624

## MIDDLESEX

**ST MARTIN'S SCHOOL**

Required for September 1987, a qualified assistant teacher in the Prep. to teach a small class of 5-6 year olds. Some musical ability would be welcome. Salary Burnham Scale 1. Apply in writing with C.V. and names of two referees to the Headmaster as soon as possible. (35478) 205624

## MIDDLESEX

Qualified/experienced teacher for class of 8 year olds. Small independent Prep. School. N. London. Apply to the Headmaster, St. Martin's School, 19 Pembroke Square, London W2. 101-229 205624

## NORTH YORKSHIRE

**ASHVILLE COLLEGE**

Harrogate

(120 boys and girls, 7-11)

Required in September 1987 a qualified member of staff to take charge of a form of 7 to 8 year-olds. Burnham Scale. Apply with C.V. and names of two referees to the Headmaster. From whom further details may be obtained. (35478) 205624

## REDBRIDGE

**WOODFORD GREEN**

**PREPARATORY SCHOOL**

10000 Road, Snakes Lane, West Woodford Green, Essex

I.A.P.S. Co-Educational Day School 4-11

Required for September 1987 a qualified member of staff to take charge of a form of 7 to 8 year-olds. Burnham Scale. Apply with C.V. and names of two referees to the Headmaster. From whom further details may be obtained. (35478) 205624

## RUGBY

**BILTON GRANGE**

VACANCY IN P.E. and

coaching required top from Rugby. Coaching in Hockey, Cricket, Swimming, Gymnastics, Soccer for interest in drama, outdoor pursuits incl. camp, canoeing and hill-walking. Resident accommodation. Permanent and national contracts. Apply Headmaster. (35478) 205624

## SOMERSET

Required for September 1987

a Class Teacher for the Reception Class of a prep school. Some boarding duties. Apply with full c.v. and names of two referees to the Headmaster, St. Martin's School, 19 Pembroke Square, London W2. 101-229 205624

## SOUTH GLAMORGAN

**MONKTON HOUSE**

**EDUCATIONAL TRUST**

**CLAYDON ROAD**

School. Required for September 1987 a class teacher for a

preparatory school. Due to increasing pupil numbers, two qualified teachers required for September 1987. The school is a class teacher for September 1987. The vacancy is for a class of 6 year olds, teaching all subjects. Applications should be made with two names and addresses of two referees to the Headmaster as soon as possible. (35478) 205624

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## Tamworth College of Further Education

Applications are invited for the post of

## Vice-Principal (Group 4(e))

with effect from 1 September 1987

from appropriately qualified and experienced persons.

Salary: £19,125 p.a.

Further details and application forms are obtainable from the Principal's Secretary, Tamworth College of Further Education, Croft Street, Upper Gungate, Tamworth, Staffs., B79 8AZ, to whom completed applications should be returned by 27 March 1987. Telephone: Tamworth 62344 Extension 11. Interviewing will be held on 27 March 1987. Trade Union membership encouraged.

## Staffordshire County Council

An equal opportunity employer

## APPOINTMENTS IN SCOTLAND

## LECTURER IN SPEECH AND DRAMA

Applications are invited for the above post from staff who hold suitable qualifications in Speech and Drama. Experience of teaching in primary schools is highly desirable. The post will involve teaching of students and teachers across a wide range of courses in both primary and secondary education and at the initial training and in-service stages.

The salary scale for the post is £9840-£15528 per annum (under review).

Application forms and further information from the Personnel Office Tel 041 943 1424, to be returned not later than 31st March 1987. (14008)

## LOTHIAN REGIONAL COUNCIL

Department of Education

## TEACHING APPOINTMENTS

Primary

## HEAD TEACHER

TORONTO PRIMARY SCHOOL

Leith

Responsibility Allowance £16,065

Salary will be in accordance with the current Scottish Teachers' Salaries Memorandum. Application forms and further particulars may be obtained from the Head of Personnel, Personnel Section, 40 Torphichen Street, Edinburgh EH3 8JY. Closing date of applications is 27th March 1987. The Lothian Regional Council is an Equal Opportunities Employer and will prevent discrimination on the grounds of sex, race, religion, age, colour, marital status, sexual orientation, or disability.

## BEDFORDSHIRE Education Service

## VICE PRINCIPAL

Applications are invited for the post of Vice-Principal of Barnfield College (Luton) from 1 September 1987.

This Group 5 Further Education establishment offers a wide range of non-advanced full and part-time courses in the areas of art and design, hairdressing, hotel and catering, humanities, business studies and secretarial and office studies. There is some joint course provision with neighbouring colleges of further education.

Applicants should have substantial teaching and administrative experience at a senior level and possess a sound grasp of curriculum developments within non-advanced further education. Management skills of a high order are required. The current salary for the post is £20,532.

Application forms and further particulars are obtainable from The Chief Education Officer (reference FEC1), County Hall, Bedford, MK42 9AP. Closing date: 26th March 1987

An Equal Opportunities Employer

(12647)

## STRAITHCLYDE

TIME EDUCATION

REPRESENTATIVE

Required to visit schools

in the Strathclyde region.

Write to: Director of

Marketing Services, World

Book, Chiswick, Uxbridge,

London, World Book House,

17 Mount Ephraim, Tun-

bridge, Kent TN4

8AZ. (35503) 170000

Closing date for applica-

tions: Tuesday 31 March

1987.

St. Aloysius' College is an

independent, co-educational

Catholic day school run by

the Society of Jesus. 170000

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# WALTHAM FOREST COLLEGE

## For Further and Higher Education

### School of Catering, Hotel Administration and Tourism

# Head of Department Grade IV

The post is tenable from 1st September 1987 following the retirement, on medical grounds, of the present Head of Department.

The School has an excellent national and international reputation and consistently wins medals and awards for student success. We shall be seeking a new Head of School with the ability and personality to foster this reputation and promote the School as a centre of excellence.

Applicants would be expected to have considerable experience in the hospitality or travel and tourism industry as well as experience in a senior post in further or higher education and appropriate professional and educational qualifications.

Salary £17,430 - £19,440 inc p.a. according to experience.

Application form and further details from the College Personnel Services Officer, Waltham Forest College, Forest Road, London E17 4JB. Tel: 01-527 2311 Extn 259. Closing date: 2nd April 1987.

AS AN EQUAL OPPORTUNITY EMPLOYER IN A MULTI-RACIAL AREA WE EXPECT ALL EMPLOYEES TO HAVE AN UNDERSTANDING OF AND COMMITMENT TO FURTHERING EQUALITY AND ELIMINATING DISCRIMINATION.

AN EQUAL OPPORTUNITY EMPLOYER  
Applicants are considered for their suitability for the post regardless of disability, sex, race and marital status.



## COLLEGES OF FURTHER EDUCATION continued

**AVON COUNTY COLLEGE OF FURTHER EDUCATION**  
Weston-Super-Mare, Avon  
21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

## CASSIO COLLEGE

### LANGLEY ROAD, WATFORD, HERTS WD1 3RH

#### Required for 1 September 1987:

### DEPARTMENT OF ADULT STUDIES

#### Tutor Organiser

### Lecturer Grade II

to develop Non-Vocational Adult Education in SW Herts. Duties include administration of courses over a specified geographical area and some teaching within the Department. The post offers scope for initiative and new ideas.

Salary: Barnham FE scale, Lecturer II - £8,595 - £13,856 plus £309 London Fringe allowance

Further details and application forms may be obtained from the College Registrar, please enclose fee.

South London College, Knights Hill, SE27 0TX. Tel: 01-870 4488. Department of Humanities & General Studies

Associate Lecturer in Sociology (0.8)

Applications are invited from graduates who are teacher-trained for this post tenable from 1 September 1987. In the area of Social Science, specialising in Sociology. Teaching will be in the area of GCE 'A' level and GCSE. Applicants would be expected to contribute to other aspects of the department's work, particularly Adult Returner work, including Access, and General Studies.

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## Blackpool and Fylde College

'A Centre of Excellence for Education and Training'

Faculty of Arts

DEPARTMENT OF HUMANITIES AND LANGUAGES

ASSOCIATE LECTURER IN SOCIOLOGY

Ref: Ac/1/3A

DEPARTMENT OF VISUAL COMMUNICATION

LECTURER 1 IN COMPUTER GRAPHICS

Ref: Ab/1/4

DEPARTMENT OF SOCIAL & HEALTH STUDIES

ASSOCIATE LECTURER IN SOCIAL SERVICE AND COMMUNITY CARE

Ref: Ae/1/1A

FACULTY OF BUSINESS, FOOD AND MANAGEMENT

TEMPORARY ASSOCIATE LECTURER IN OFFICE STUDIES

Ref: BfMe/1/1T

Faculty of Technology

DEPARTMENT OF CONSTRUCTION

LECTURER 1 IN PLUMBING AND HEATING AND VENTILATING

Ref: Ta/1

Closing date: 25th March, 1987

For further details and application form apply to The Principal, Blackpool and the Fylde College, Astfield Road, Bisham, Blackpool FY2 0HB.

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## COLLEGES OF FURTHER EDUCATION continued

**GRAMPIAN REGIONAL COLLEGE**  
NORTH COLLEGE OF FURTHER EDUCATION  
Edinburgh  
21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68







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# Posts Overseas

## Oman

**Oman Technical Industrial College**  
**Post 1: Head of Construction Engineering Department**  
**Post 2: Head of Electrical Engineering Department**  
**Post 3: Lecturer in Electronic Engineering**  
**Post 4: Lecturer in Civil Engineering (structures)**  
**Post 5: Lecturer in Building**  
**Post 6: Lecturer in Chemistry**  
**Posts 7-9: three Lecturers in English Language**

Duties: Posts 1 and 2: to establish and develop education and training programmes in the department; to organise the human and physical resources; to ensure appropriate standards of teaching and instruction; to devise appropriate programmes for staff and resource development.

Posts 3 and 4: to teach to Technician level in at least three of the following subjects: civil engineering construction, design of structures, construction science, applied mechanics, site organization, accounts/costing, field surveying and workshop practice; to participate in the development of courses, laboratories, workshops and teaching materials, and on-the-job training for the students.

Post 5: to teach chemistry, analytical chemistry and laboratory techniques, up to at least Technician certificate level; to participate in the development of courses, laboratories, teaching materials and industrial on-the-job training for the students.

Posts 7-9: to teach English Language and study skills to both technical and commercial students; to participate in the development and revision of courses and teaching materials.

Qualifications: candidates must be native speakers of English, with a British educational background with the appropriate teaching qualifications and experience as set out below.

Overseas experience is an advantage.  
Posts 1 and 2: a first degree in the appropriate discipline with at least twelve years' post-degree experience or a Masters degree with at least eight years' post-degree experience or a Doctorate with at least five years' post-degree experience or at least eleven years' post-degree experience or a first degree in the appropriate discipline with nine years' post-degree experience, or a Doctorate with at least three years' post-degree experience.

For all Posts: this experience should include some teaching to tertiary level students. In addition, for posts 7-9 three of these years' experience should include TEFL/TESOL and involvement in ESP, particularly overseas. Salary: emoluments including allowances up to OR 11,804, for Posts 1 and 2 and OR 9,252 for other posts. Salaries are free of local tax. (£1 - OR 0.89 approx).

Benefits: free furnished accommodation; baggage allowances; free medical and dental treatment; six weeks' annual leave for appointees, spouses and up to three children under twenty-one years of age. Contracts: one year contract with the Ministry of Social Affairs and Labour in Oman, renewable by mutual agreement. Candidates seeking several years' employment will be preferred. Starting 1 September 1987.

Closing date for applications: 31 March 1987. Candidates should send a CV, a recent passport photograph and a letter of recommendation from a senior official in their present institution, together with an application form and further particulars of the posts.

Reference: 86 A 363-3717

## Egypt

### The British Council Teaching Centre in Cairo

requires supervisory and teaching staff for its Science and Computing sections. The Centre has 3 sections and a total enrolment of 3,600 students and a teaching staff of eighty. The Centre is situated on the Nile.

**Posts 1-5: 5 GCE Science teachers for Biology, Physics, Chemistry, Mathematics, Geology.**

Duties: to teach these subjects to GCE 'O' level. All teachers should offer a second subject. Qualifications: relevant PGCE or teaching certificate plus relevant experience preferred.

**Post 6: Teacher of Computing**

Duties: to teach adults from beginners to Intermediate (RSA) level using BBC B Micros in a network and/or Amstrad PC1512. Qualifications: teaching qualification plus relevant experience preferred.

Salary for Posts 1-6: £58,000-£83,000 p.a. Local allowance £2,250 per month. (£1 - £22.1 approx). Part of salary can be paid in sterling. Salary scales include incremental points for qualifications and experience. All scales currently under review. Benefits: annual airfares to and from UK; baggage allowance; 6 weeks leave p.a. Contract: two years renewable.

**Post 7: Director of Studies (GCE Science Section)**

Qualifications: Science degree, teaching qualification, relevant administrative and supervisory experience.

**Post 8: Director of Studies (Computing Section)**

Qualifications: relevant teaching qualification, administrative and supervisory experience. Duties for Posts 7 and 8: administrative and professional management of the relevant section of the Centre.

Salary for Posts 7 and 8: £10,000-£12,048 p.a. Local allowance: £2,800 per month. (£1 - £28.1 approx). Salary scales include incremental points for qualifications and experience. All scales currently under review. Benefits for Posts 7 and 8: Civil Class return airfares to UK annually for spouse and family. School fees allowance for children at post. Baggage allowance, 6 weeks leave p.a. Contract: two years renewable.

Closing date for all posts: 15 April 1987.

For further details and an application form, please write, quoting the post reference number, to: Overseas Educational Appointments Department, The British Council, 66 Davies Street, London W1Y 2AA.

**The British Council**

## OVERSEAS POSTS continued

**FRANCE**  
School of English for Adults.  
Requires native speaker of English. Teacher, full-time, contract starting in March on April. Minimum salary £3,800 p.a. Apply direct with photo to: 7, rue de la Paix, 75001 Paris. Tel: 83.55.04.84. (35744) 460000

**FRANCE**  
ADDITIONAL EDUCATION  
Urgently requires English teacher. Initial contract April 87 - July 88, to run resource centre. Native speaker. Experience, degree and good French necessary. TEFL desirable. CEL/217 Avenue Pierre Brossolette/100002 (Troyes Cedex) France. 460000 (35753)

**FRANCE**  
THE ANGLEPOLE SECTION  
(150 students) 6-18  
CSCS INTERNATIONAL  
DE FONTAINEBLEAU  
is seeking for September 1987  
**TEACHER/TEACHING HEAD OF SECTION**  
to teach History/English to bilingual students at secondary level ('O' Level preparation), a recognised qualification, and to be responsible for the administration and development of the section's activities.

Candidates should have considerable teaching experience (preferably in international schools), a recognised UK or US degree and have English as their mother tongue. Fluency in French desirable. Salary according to qualifications and experience. Full C.V. photo, plus the names of two referees should be sent to the Anglo-Pole Section, 4 Rue D'Avon, 77300 Fontainebleau, France (Tel: 0164221177). 460000 (02828)

**GERMANY**  
MUNICH INTERNATIONAL  
6000 pupils, 4-18 years  
Seeks for August 1987  
Teacher, Upper/Lower Secondary (9-13 year olds)  
Teacher, Junior (6-11 year olds)  
Teacher, Senior (11-18 year olds)

Please send C.V. together with names, addresses and contact telephone numbers of three professional referees to the Headmaster, Munich International School, 100000 München, Germany. Tel: 089 30611. 460000 (35763)

**GREECE**  
Wanted from August 1987 to May 1988  
English teachers to work in English Language Institute. TEFL experience welcome but not necessary.

Apply to: Effie Vassiliou, 103 Farsalon Str, 41533 Larissa, Greece, with details of experience, copies of diplomas, a recent photograph and phone number. 460000 (028963)

**GREECE**  
BRITISH EMBASSY SCHOOL  
Athens, Greece  
(1,200 pupils, 4-18 years)  
Requires 2 experienced teachers: 1. Infant teacher (4-7 years) 2. Junior teacher (7-11 years) 3. Senior teacher (11-18 years) 4. Music specialist (throughout school) 5. Art specialist (throughout school) 6. PE specialist (throughout school) 7. English teacher (11-18 years) 8. Science teacher (11-18 years) 9. Mathematics teacher (11-18 years) 10. History teacher (11-18 years) 11. Geography teacher (11-18 years) 12. Modern Languages teacher (11-18 years) 13. Religious Education teacher (11-18 years) 14. Physical Education teacher (11-18 years) 15. Art teacher (11-18 years) 16. Music teacher (11-18 years) 17. PE teacher (11-18 years) 18. English teacher (11-18 years) 19. Science teacher (11-18 years) 20. Mathematics teacher (11-18 years) 21. History teacher (11-18 years) 22. Geography teacher (11-18 years) 23. Modern Languages teacher (11-18 years) 24. Religious Education teacher (11-18 years) 25. Physical Education teacher (11-18 years) 26. Art teacher (11-18 years) 27. 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## LONDON BOROUGH OF HAVERING EDUCATION DEPARTMENT CAREERS OFFICER

HORNCHURCH

Grade APTC Scale 4/5 (Scale 5 for those possessing Dip. C.G.)  
Salary £8,049 - £9,954 p.a. (£9,129 starting salary for those possessing Dip. C.G.)

Energetic and enthusiastic Careers Officer required to carry out the full range of Careers Officer duties. Qualified and/or experienced Careers Officers preferred.

Further details and application forms available from the Director of Educational Services, Mercury House, Romford, Essex, RM1 3DR, (Ref. Staffing/LG/321). Tel: Romford 66999 Ext. 4551. Closing date 27th March 1987.

## ADMINISTRATION L.E.A. CONTINUED

### STAFF & CURRICULUM DEVELOPMENT SERVICE

Applications are invited from well qualified and suitably experienced teachers for the following newly created posts in a developing advisory service.

Candidates should have had successful teaching and management experience in comprehensive schools and some experience in the in-service training of teachers.

- |                     |                                  |
|---------------------|----------------------------------|
| 1 GENERAL ADVISER   | MODERN LANGUAGES<br>(HT Group 8) |
| 2 GENERAL ADVISER - | HUMANITIES<br>(HT Group 8)       |
| 3 GENERAL ADVISER - | SPECIAL NEEDS<br>(HT Group 8)    |

Application forms/further details (large sac) from the Director of Education, Old Town Hall, Middleton Road, Chadderton, Oldham OL9 6PP, returnable to him by 27th March 1987.

An Equal Opportunity Employer.  
Assistance with Local Authority Housing available.

**Oldham**  
Metropolitan Borough

Education  
Committee

### Education Support Service Head of Section 11 Support Service

Burnham Head Teacher Group 7  
£15,666-£17,148 p.a.

The purpose of the Nottinghamshire Education Support Service is to contribute to improving the quality of learning through a planned structured programme of support to teachers/lecturers and pupils/students. It brings together all those staff who are not part of either the Education Department's administrative structure or part of a school/college staff and adopts a collaborative approach to work with schools and colleges. The Service has six sections including: The Classroom Support Service, The Dance and Drama Support Service, The Music Support Service, The Special Needs Support Service, The Off-Site and Resources Support Service and the Section 11 Support Service. This is a new post demanding qualities of leadership and a strong commitment to supporting development of the work of those staff employed under Section 11 of the 1986 Local Government Act. Applications are required from teachers/lecturers with relevant teaching experience, successful experience of supporting curriculum/professional development and the management of staff at either school or L.E.A. level.

Details of the Nottinghamshire Education Support Service and application forms are available from the Chief Education Officer at County Hall, Closing date 27 March. Please quote ref: RJS/DB.

An Equal Opportunity Employer.



**Nottinghamshire  
County Council**  
County Hall, West Bridgeford  
Nottingham NG2 7QP

### Advisers

£18,075 - £19,587  
(pay award pending)

The first phase of a planned expansion is now taking place within Devon Advisory Service.

For additional posts of phase advisers (to cover primary and secondary education) within one of the areas of county we are seeking candidates who have had recent senior management experience in schools. In addition there are some posts for individual subjects (history, economics and business studies) and one post for community education. The subject posts would be based at County Hall, Exeter, while one phase post will be located at Barnstaple, Exeter, Paignton and Plymouth.

**Primary education**  
(4 posts) 3 needing early years experience and 1 with middle years experience.

**Secondary education**  
(1 post) - with additional countywide responsibilities.

**History**  
(1 post) - to cover both primary and secondary education.

**Economics and Business Studies**  
(1 post) - with some responsibility for these subjects in further education.

**Community Education**  
(1 post) - to have a particular responsibility for training.

Application form and further details (see please from Chief Education Officer (Personnel Section) County Hall, Topsham Road, Exeter.

Closing date 30th March 1987

**DEVON**

AN EQUAL  
OPPORTUNITIES  
EMPLOYER

### Somerset County Council

AN EQUAL OPPORTUNITIES EMPLOYER

### SOMERSET EDUCATION AND CULTURAL SERVICES COMMITTEES CAREERS SERVICE

#### SENIOR CAREERS OFFICER (Training and Development)

Salary Grade P01 £11,952 - £12,884

The successful candidate will be based at County Hall, Taunton and will be responsible to the Education Officer (Careers) for the planning, supervision and co-ordination of all aspects of careers officer and careers leader in-service training; and for leading and monitoring the development of psychometric and computerised guidance aids.

Candidates should be qualified and experienced careers officers and should preferably have an occupational psychology background together with a knowledge of computer developments in the career field.

Further particulars and application forms are available from the Chief Education Officer, Staffing (NT) Section, Education Department, County Hall, Taunton, Somerset. TA1 4DY. (see please)

Closing date 27th March 1987

## PRINCIPAL ADVISORY OFFICER

£22,251-£23,700 p.a.

Bradford is a progressive education authority, which has created an exciting and innovative environment in its schools and colleges and is to appoint a Principal Advisory Officer following the retirement of the previous postholder.

You will play a leading role in the management of curriculum development and change, particularly in relation to the many special initiatives, including equal opportunities, special needs, in-service education, TVET and education/employer links, in which Bradford is playing a leading and innovative role nationally.

You will be well-qualified and have substantial experience as a teacher and an LEA adviser, with a strong commitment to educational policies which reflect the needs of the District.

You will report to the Director, Mr. W. R. Knight, and will be a member of the Directorate Management Team. You must be capable of working under considerable pressure and often outside normal office hours. Closing date for receipt of applications is 27th March, 1987. Ref: E12787/713

This Council supports the principle that all employees should be encouraged to be members of an appropriate trade union recognised for the purpose of negotiation and consultation.

Application forms are available from the Directorate Personnel Office, Directorate of Educational Services, 4th Floor, Provincial House, Market Street, Bradford BD1 1NP. Tel. (0274) 752236.

We are an equal opportunities employer and welcome applications from candidates of any age, sex, race or disability who regard this job as a career.

**City of Bradford Metropolitan Council**

### PRINCIPAL SCHOOL MEALS ORGANISER

Salary £14,034 p.a. - £14,751 p.a. Incl.  
(Starting salary may be above the minimum of the range).

We need an Organiser to manage and control the School Meals Service which produces almost 12,000 meals per day on a cash cafeteria basis. Responsibilities include the preparation of estimates and the exercise of cost control.

Willingdon encourages pupils towards healthier eating and the successful applicant will be expected to subscribe to these aims.

Applicants should hold a recognised catering qualification (HICMA or equivalent) and have experience of large scale catering, preferably in school meals. An essential car user allowance is payable.

There is a generous relocation scheme which includes payment of all legal fees, estate agents fees, stamp duty, surveyors fees, and mortgage redemption charges incurred in the sale and purchase of a property. In addition, a settling-in allowance of up to £350 may be payable, plus 100% of approved removal expenses.

Application forms for the above posts are available from the Personnel Division, Civic Centre, Uxbridge, Middlesex, UB8 3PH. Telephone Uxbridge 80888 (24 hour answering service available). Please quote reference number E/20/21802. Closing date 3 April 1987.

**HILLINGDON**  
THE WEST LONDON BOROUGH

### ADMINISTRATION - LEA continued

### BUCKINGHAMSHIRE EDUCATION DEPARTMENT AN Equal Opportunity Employer CAREERS OFFICER - COUNCIL ADVISORY AREA CAREERS OFFICER

Salary: Scale 4/5/6 (£7,311 - £10,164 p.a.)

Progression to Scale 5 immediately following successful completion of the probationary year. A responsibility for the development of the curriculum in the post-compulsory sector. The Authority is looking for a candidate who has the qualifications, experience and ability to develop the role in relation to colleges of further education, schools, the Youth Training Scheme and the Voluntary Sector.

Closing date: 3rd April, 1987.

Application forms and further details available from the Director of Education, Norfolk House, Walker Place, Rotherham S60 1QT.

G. Crane, Director of Personnel (35839)

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### ROTHERHAM METROPOLITAN BOROUGH

DEPARTMENT OF  
EDUCATION

Post Reference: ED. 884

ADVISER FOR FURTHER  
AND CONTINUING  
EDUCATION

Salary: Group 8, £16,785

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## Director of Education

Salary Scale £27,642  
(by £690 x 4) - £30,402 p.a.

Amended advertisement -  
(previous applicants need not re-apply).

Applications for this post, which will become vacant on 30th June, 1987 are invited from candidates who are graduates and have appropriate teaching experience and substantial educational administrative experience in a major and progressive local authority.

The successful applicant will be responsible for the organisation and administration of the County Council's function as Local Education Authority and will be a member of the Chief Officers' Management Team.

Application forms, which must be returned by 26th March, 1987, and further particulars are available from the Chief Executive and Clerk, County Hall, Durham DH1 1UL or by telephone on Durham (0388) 64411, Ext. 2488.

Durham County Council  
is an equal opportunity employer.

**Durham**  
COUNTY COUNCIL

### THE WEST MIDLANDS EXAMINATIONS BOARD



a member of the

MIDLAND EXAMINING GROUP



Applications are invited for the following appointments tenable from 1st September 1987.

#### Senior Assistant Secretary (Development)

The successful applicant will head a team of 3 Assistant Secretaries with responsibility for the administration of the Board's Record of Achievement and the consideration of GCSE Mode 3 schemes including TVEI and modular courses. Candidates should have graduate or equivalent qualifications in modern languages, recent teaching or Examinations Board experience, detailed knowledge of the GCSE, records of achievement and the modular curriculum.

The salary on appointment will be at a point on the NJC scale 46 - 49 £16,776 - £17,916 (under review).

#### Assistant Secretary (Sciences) (Re-advertisement)

The successful applicant will be responsible for the servicing of the MEG Chemistry Panel, the administration of its three Mode 1 GCSE examinations, liaison with the other MEG Science Panels and advice on MEG Science examinations to schools/colleges in the West Midlands. There will also be some involvement with the Board's Record of Achievement and the development of schemes of assessment for modular courses. Candidates should have graduate or equivalent science qualifications, recent teaching or Examinations Board experience, detailed knowledge of the GCSE and of the assessment of science courses in secondary education.

The salary on appointment will be at a point on the NJC scale 42-45 £15,243 - £16,374 (under review).

Both appointments are superannuable and conditions of service generally will be those prescribed by the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services and as determined by the Board.

Applications should be submitted by Friday 10th April, 1987.

Further details are available from the Secretary, The West Midlands Examinations Board, Norfolk House, Smallbrook Queensway, Birmingham B6 4NJ or telephone 021 631 2151.

All advertisements are subject to the conditions of acceptance of Times Newspapers Ltd, copies of which are available on request

Oldham LEA has submitted a TVEI proposal to the MSC, with a view to commencing the scheme in September 1988.

The following post is available from the 1st September 1987.

### TVEI CO-ORDINATOR - HEADTEACHER GROUP 8

Applications are invited from well qualified and suitably experienced candidates for this important post, which will be an integral part of the Advisory Service. The successful candidate will be expected to play an important part in the planning and development of the scheme in the pilot schools and in preparing the way for the implementation of the scheme in all the Authority's Secondary Schools in due course.

Considerable experience in the related areas of TVEI is an essential requirement for this post.

Informal enquiries welcome by telephone Mr W Dempsey on 061 678 4201 or Mr C P Hewson on 061 678 4228.

Application forms/further details (large sac) from the Director of Education, Old Town Hall, Middleton Road, Chadderton, Oldham OL9 6PP, returnable to him by the 27th March 1987.

Re-Advertisement - previous applicants remain under consideration

An Equal Opportunity Employer







# GRADUATES WE'RE LOOKING FOR A GRAND SLAM, NO TRUMPS.



If you have an analytical mind, an aptitude for solving thorny problems and highly-developed reasoning powers, you could be a very good bridge player. We might also offer you a career as a Tax Inspector.

We are looking for people who can analyse complex circumstances. We don't pretend that learning the necessary skills and diplomacy to agree tax liabilities, investigate evasion and negotiate settlements is an easy undertaking, but it could hold a very promising future. After a few months training you will be carrying your own casework, and making your own decisions. Subject to successful progress, you can expect your first promotion within 4-5 years. Eventually, you can look forward to running your own tax district.

You must be under 36 with a first or second class honours degree in any subject or an acceptable equivalent. Final year students may apply. Salary according to qualifications and experience starts from £7320 rising to £24,300. Working in Central London you would receive £18,700 on your first promotion. Beyond this there are opportunities for promotion to the most senior levels in the Civil Service. Salaries are higher in London. Training can normally begin at an office in the area of your choice.

To find out more and for an application form please write to the Civil Service Commission, Alencon Link, Basingstoke, Hants RG21 1JB, or telephone Basingstoke (0256) 468551 (answering service operates outside office hours). Please quote ref: A/87/320/285.

The Civil Service is an equal opportunity employer



## CHRISTIE'S

EDUCATION

Tutors

We require two new full-time tutors to join our existing team, one to teach the Course Antiquity to 1450, and one to teach the Course 1450 to the present day. Tutors give specialised lectures and supervise a group of 15 students by means of tutorials, seminars, essays and projects. Both courses attract mostly postgraduates and mature students of differing nationalities and backgrounds. These are lively and challenging posts, for anyone with a genuine interest in teaching. We are looking for tutors with a developed interest in the decorative arts as well as the fine arts, wishing to expand their range of knowledge.

Salary will depend on qualifications and experience but will be commensurate with equivalent posts in Higher Education and Museums.

For further details please write to the Course Director,

Robert Cumming, Christie's Education,  
63 Old Brompton Road, London SW7 3JS

## Considering a change of career?

**A HIGH INCOME:** You will earn over £12,000 in your first year with us if you meet the basic targets. Our better consultants earn over £18,000 p.a.

**SECURITY:** Working for a £4 billion financial services group, you will be on a regulated earnings scheme of £7,000 (negotiable) and based in LONDON.

If you are aged 22-35; positive, hard working and well spoken, ring: 01-828 2462.

## MISCELLANEOUS

continued

### BARKING, HAVERING & BRENTWOOD HEALTH AUTHORITY HEALTH EDUCATION OFFICER

Scale 4 £5,562-£10,436 + 33.7 p.a.

This post is within a progressive department offering an increasing amount of specialist support to its staff in their work of providing health education to the entire community.

The person appointed will have the ability to participate in all aspects of the health education work of the authority and will have a degree of special responsibility.

This is a non-smoking post.

Application form and job description from District Personal Department, Leigh House, Harold Wood Hospital, Essex RM3 0NE. Tel: Ingrave 49511, Ext. 255/251.

Closing date 27th March 1987. (35320) 600000

### HERTFORDSHIRE COUNTY COUNCIL

An Equal Opportunity Employer  
HERTFORD PALACE  
THEATRE EDUCATION/  
CABRIO COLLEGE

T.I.E. DIRECTOR  
For further details ring 0993 3145. Previous applicants need not apply. (02518) 600000

### LANCASHIRE COUNTY COUNCIL

An Equal Opportunity Employer

### SCALE 1 - PERIPATETIC TEACHER OF STRINGED INSTRUMENTAL MUSIC TEACHING SERVICE

(Region 3: Blackpool and Lytham St Annes Areas)  
Required 1st May 1987 or as soon as possible thereafter.

Application form/ further details from/to Civil Service Commission, Alencon Link, Basingstoke, Hants RG21 1JB, or telephone Basingstoke (0256) 468551 (answering service operates outside office hours).

Please quote ref: G(9)382. An equal opportunity employer.

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## THE TIMES EDUCATIONAL SUPPLEMENT 13.3.87

continued

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## THE TIMES EDUCATIONAL SUPPLEMENT 13.3.87

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## THE TIMES EDUCATIONAL SUPPLEMENT 13.3.87

continued

### LANCASHIRE COUNTY COUNCIL

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### SCALE 1 - PERIPATETIC TEACHER OF STRINGED INSTRUMENTAL MUSIC TEACHING SERVICE

(Region 3



## THE OPEN UNIVERSITY MA IN EDUCATION

Applications are invited for a new part-time distance-taught modular course, leading to the award of the Open University degree of MA in Education.

The MA in Education is a professional postgraduate qualification designed particularly for those with experience in teaching, the advisory service, educational administration or an allied field. Students can select from a range of modules a programme to suit their background and professional goals. In 1988 modules will be offered on the following topics:

Educational Evaluation  
Classroom Studies  
Gender and Education  
Educational Organisations and Professionals  
Language and Literacy

For subsequent years the proposed modules include: Education, Employment and Training, Educational Management, Child Development.

The programme is open to applicants in any part of the United Kingdom. The teaching year will begin in February and finish in October. Teaching is by correspondence texts, projects and assignments, optional tutorials and day schools; a residential summer school week is an integral component of most modules.

The degree of MA in Education is awarded to students who have successfully completed three modules. Those with an Open University Advanced Diploma need only study a further two modules. Students will study one module per year and may therefore complete their MA in two or three years.

Applicants should normally have either a first or second class degree or an Open University Advanced Diploma.

For a prospectus and application form, please send a POSTCARD to the Higher Degrees Office, (ME/2) The Open University, PO Box 49, Milton Keynes MK7 6AD, or telephone Milton Keynes (0908) 653361 or 653806.

The closing date for applications is 29th May 1987.

## ENGLISH AS A FOREIGN LANGUAGE

**SUSSEX**  
MAIDS SCHOOL OF ENGLISH  
Graduate level courses  
TEFL qualification and experience  
required for summer  
courses June - September  
(Adults/Children)  
The Principal, 2 Old Orchard  
Road, Eastbourne, Sussex  
BN21 1DB. Tel: (0323) 343357  
Fax: (0323) 343373 (evening)

**TOKYO**  
Friendly English Language  
School seeks EFL teachers for  
late April or September.  
For details please write en-  
closing typed CV plus photo-  
graph, supporting letter, two  
professional references and  
A.I.C. Certificate to:  
Days House, 123 Earlham  
Road, Norwich NR2 3SR  
(0693 11)

**V.S.O.**  
Please see VSO display and  
under Overseas Appoint-  
ments. (35495) 700000

**WIMBLEDON**  
WIMBLEDON SCHOOL OF  
ENGLISH

Requires a permanent  
full-time TEFL teacher.  
Degree plus R.A.A. or  
T.E.F.L. Diploma or  
equivalent qualifications  
are ESSENTIAL.

Salary on scale £8,600 -  
£9,700

Please send c.v. to 41  
Worple Road, London  
SW19 4JZ. (35568) 700000

## English as a Second Language

**BUCKINGHAMSHIRE**  
Wycombe Area Teacher to  
work with ethnic minority  
children in Nursery educa-  
tion. (35587) 710000

**REDBRIDGE**  
LONDON BOROUGH OF  
REDBRIDGE

LANGUAGE SUPPORT  
SERVICE  
Teachers' Centre,  
Melbourne Road, Ilford,  
Essex IG1 4HT  
Tel: 01-553 4811

Head of Services Mrs  
Carol Edwards  
Required from April  
1987 suitably qualified and  
experienced teachers to  
join the Language Support  
Service. There are two permanent  
vacancies for permanent  
teachers working  
mainly in primary schools  
and secondary schools. One  
term vacancies in second-  
ary schools. Details of the  
service are available for  
suitable candidates.

The Authority is com-  
mitted to the development  
of whole school policies  
for teaching bilingual chil-  
dren and the Language  
Support Service is re-  
sponsible for the imple-  
mentation of their imple-  
mentation.

Application forms and  
further details are avail-  
able from the Head of the  
Language Support Service  
to whom completed forms  
should be returned by  
30th March 1987.

Outer London Allow-  
ance payable. 710000  
(35446)

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LONDON BOROUGH OF  
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Melbourne Road, Ilford,  
Essex IG1 4HT  
Tel: 01-553 4811

Head of Services Mrs  
Carol Edwards  
Required from Septem-  
ber 1987 a suitably qual-  
ified and experienced teacher  
to teach to the needs of the  
Borough's rapidly develop-  
ing Language Support Ser-  
vice. The successful candi-  
date will be the Head of the  
S.S.L. Department in West-  
east High School. The Au-  
thority is committed to the  
development of whole  
school policies for teaching  
bilingual children and the  
Language Support Service is  
responsible for the co-  
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